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Rocky Mountain Medical Journal

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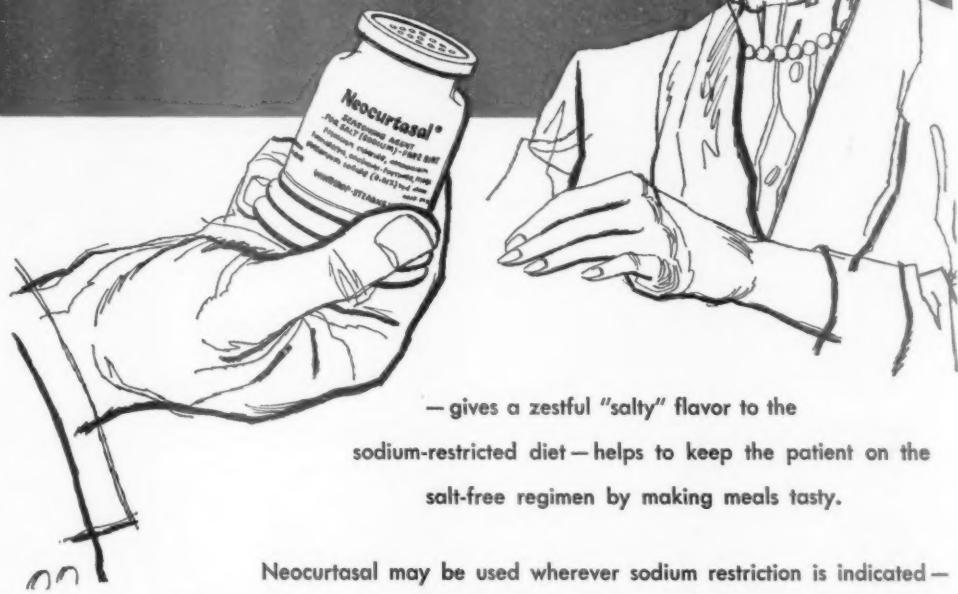
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1. Heller, E. M.: The Treatment of Essential
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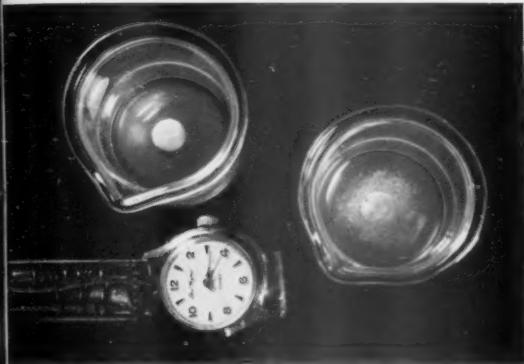
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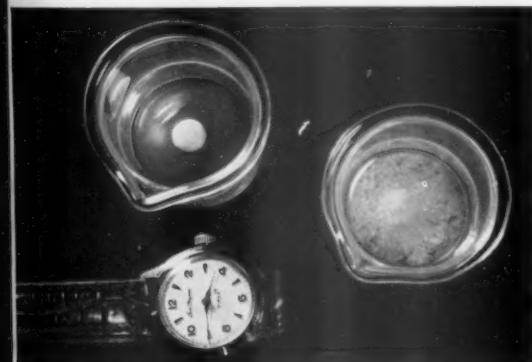
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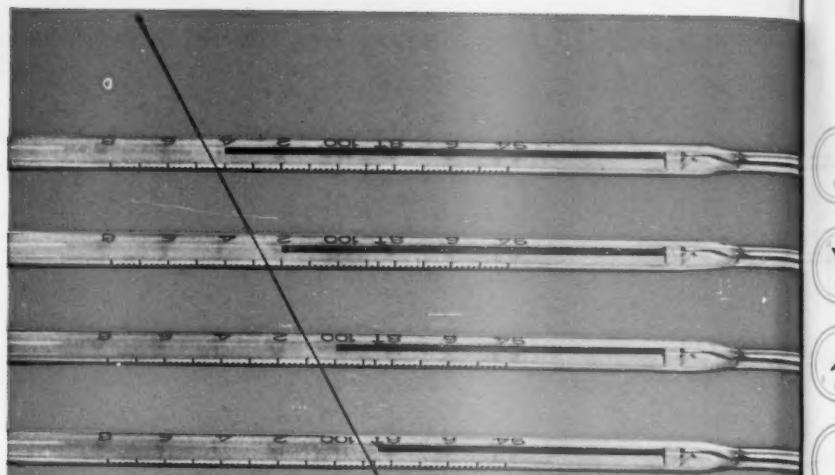
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Rocky Mountain Medical Journal

JUNE, 1954

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WE MAY be just a little bit prejudiced but we doubt very much if there are many places in our country where there exists a better relationship and friendly spirit involving press, radio and TV, the medical profession and the hospitals for the advancement of public health, than in Colorado.

A lot has gone before to give credence to such a belief but two recent events seem to justify this belief. One is the polio field trial program which moved to an auspicious start in seven Colorado counties, despite certain national overtones of doubt which failed to damage our spirits. The other is the recent United Cerebral Palsy telethon over KBTW in Denver which raised in excess of \$150,000.

These two happenings illustrate the value of an informed public opinion and show what can be done to benefit a good cause when there is cooperation and sufficient elbow grease. It took a lot of hard work and planning by many organizations and agencies to set up the polio field trial but the first round went extremely well and considerable credit must go to the media who so liberally informed the public.

The cerebral palsy affair was more dramatic and involved a well produced and finely organized television marathon for sustained interest and some clever appeals to the pocketbook. But back of it all went many hours of hard work, the volunteer efforts of hundreds of people and adequate radio, TV and newspaper reporting.

We think it is a good thing that our people are well informed. We appreciate all the contributions medicine has made to such progress, examples being the Colorado weekly health story, "Old Doc Experience," the radio series, "Dr. Tim, Detective," and others.

More recently, the state's TV stations used a total of eleven of the available health programs available through the American Medical Association. Later in May ten radio stations began carrying the Colorado Society's new series of five-minute programs based on "Old Doc Experience" and another dozen stations had the use of selected AMA radio programs. Press coverage of medical meetings and medical news is good and continuous, and is certainly informative.

All of which brings to mind that our citizens are kept posted by an enlightened, competent media and that is good. It is good enough that the polio vaccine test was done in fine style on the first round, despite some wobbling in other parts of the nation.

We think it's a good time to say "thank you" to our press, radio and TV people for doing a superlative job in the public interest.

THE pendulum swings and, having swung, comes back again; sometimes it stops, but more often it carries on at a lower level and with less momentum. So it is in the evolution of a profession. Great enthusiasm for new or revised therapeutic measures comes, goes, or simmers

Culpable?

down. Any one of us could think of innumerable examples.

A recent one is the abrasive treatment of superficial scars. So-called "sandpaper surgery" has had a recent inning abetted by articles in magazines, newspapers, and medical journals. The procedure does not, in our opinion, deserve the dignity of being classed among surgical operations. Abrasive treatment of this type is described in textbooks of a generation and a half ago. Too much publicity, particularly when premature and not critically edited, often does harm. In the question at hand, thousands have been led to believe that another miracle has been born. What a blessing it would be if the term "miracle" could be forever deleted from the annals of medical and surgical history! The term, however, might be properly applied to the work which Father Time and Mother Nature do on our behalf!

A "gem" in medical literature appeared in The Ohio State Medical Journal in 1953 under the title "Medical Culpability and the Abrasive Treatment for Acne Scars." It is a fine example of over-enthusiasm, we hope merely the enthusiasm of youth which will be tempered by maturity and experience. The author states that improvement in appearance may range from 20 to 70 per cent and that the procedure is seldom worth the effort and inconvenience if maximum improvement is expected to be less than 50 per cent. After an unrevealing discussion of psychologic aspects and anesthesia, but nothing about technical considerations, the author takes a shot at us, his brethren. He says that many doctors, through ignorance and/or stubbornness, are discouraging the use of the abrasive treatment. And then comes the crown jewel: "There has been nothing developed to date in the field of medicine or surgery which closely approximates the beneficial effects of the abrasion treatment for superficial scarring of the skin by such diseases as acne and smallpox." He doesn't think much, obviously, of the history of our profession. What about preventive medicine, thoracic surgery, neurosurgery, endocrinology, antibiotic therapy, and all our other victories—to name only a

few? Must they bow to elective abrasion treatment of superficial scars? Doctor, author of those lines, come back to earth!

Let's face some facts. There will always be scar where scar now exists. If adjacent skin is abraded below the level of germinal epithelium, new scar will form. If it is abraded to, or almost to, the germinal epithelium its former level will be approached as it heals and for a few weeks or months thereafter. Thus, early results may look hopeful, but end results often disappoint both doctor and patient. Let us tell the patient these facts, speak conservatively, and promise him nothing. We hope that his satisfaction will then exceed his anticipation. And he, the patient, will not have been "taken in" by inflated prognostications of a magazine writer or a colleague whose enthusiasm exceeds his judgment and experience. May our profession's major accomplishments never be measured in terms of sandpaper!

MORE than 100 Rocky Mountain area physicians will be in San Francisco later this month for the nation's biggest annual medical meeting, the Annual Session of the Americal Medical Association.

"Frisco" Calls Us New Mexico, Montana, Wyoming, Utah and Colorado will between them send six representatives to the House of Delegates of the A.M.A. for a busy week of policy-making activity. A score of other Rocky Mountain physicians will appear on programs of the A.M.A. Sections or will present scientific exhibits.

Among the highlights of the Annual Session will be the formal inauguration of Dr. Walter B. Martin of Virginia as the A.M.A.'s 108th President, succeeding Dr. Edward J. McCormick of Ohio. The ceremony will be broadcast nationally by the ABC network. An innovation this year is a special session on legal medicine, attracting many attorneys as well as physicians.

Brain Tumors in Infants And Children*

WILLIAM R. LIPSCOMB, M.D.

Denver

IT is written that about 2 per cent of all tumors in adults and children are brain tumors, and about one in a thousand children seeking hospital admissions for serious illness have brain tumors. In children brain neoplasms are predominately twice as common below tentorium as above, and are gliomas in cell type. The common gliomas are medulloblastomas and astrocytomas. Less common are the ependymomas and spongioblastomas. Other cell types, such as dermoids, hermangio-endotheliomas, are occasionally found. Tuberculomas are seldom seen in this country, and rarely are metastatic intracranial tumors encountered in children.

Infratentorial Tumors

Medulloblastomas: Approximately 15 per cent of all brain tumors in infants and children are medulloblastomas. They are one of the most malignant of gliomas. The common site of origin is in the roof of the fourth ventricle or in the cerebellum. They grow rapidly and have a tendency to spread to other locations of the brain and spine by way of subarachnoidal spaces. Medulloblastomas are very sensitive to irradiation therapy so after verifying the diagnosis pathologically with biopsy, the patients should be given irradiation therapy to the skull and spine. The operative mortality of medulloblastomas is as high as 22 per cent in the hands of such authorities as Bailey, Buchanan, Bucy†, 26.3 per cent by Cushing. The postoperative survival period without postoperative irradiation was seven months in the cases of Bailey and Cushing, whereas with postoperative irradiation it was nineteen months. Elvedge, Penfield, Cone report their cases receiving postoperative ir-

radiation to have a survival period of twenty-two months. It is, therefore, obvious that in patients having medulloblastomas, irradiation is the greatest factor in prolonging life as well as relieving symptoms of the patients.

CASE REPORT

C. E. was a 3-year-old female child who was first examined because of difficulty in walking. The child was adopted at one plus years of age. She had no disturbance of gait at that time; she had been alert and friendly and had developed normally. Six months before examination she began to vomit once or twice weekly and usually in the evening. Three months before examination she began to have difficulty in walking, became irritable, and had headaches with vomiting. She had had a mild febrile illness prior to onset of the present illness but was otherwise well. On examination she was cooperative and alert. She had a right Babinski reflex and there was a suggestion of a right adiadiokinesis. She stood on a wide base and was unable to walk without holding onto objects or persons. She had a McEwen's sign, and was tender over the middle of the occiput. X-rays of the skull revealed separation of the cranial sutures. Lumbar cerebrospinal fluid studies revealed initial pressure to be 16 cm. of H₂O. The fluid contained 3 lymphs, and 21 mg. per cent total protein. A diagnosis of an expanding posterior fossa lesion was made. Because of the short history and signs of posterior fossa expanding lesion, a medulloblastoma was suspected and her occipital area was irradiated without histological proof of the lesion. In a very short time she became steady of gait, stopped vomiting, and acted quite normal. Seven months post-irradiation she had pain in the abdomen and mid thoracic spine which on examination was found to be radicular on spinal motion. X-rays of the thoracic spine were negative. She was given irradiation treatment to the entire spine because a metastasis was suspected. Again she quickly improved so seven months later when she was examined she was running, playing, and feeling very well. Two and one-half years after she was first examined and given the first irradiation therapy she was taken to an ear, nose, and throat specialist because of epistaxis and nasal obstruction. He found a tumor obstructing the naris and obtained tumorous tissue which was diagnosed medulloblastoma. More irradiation was given to the skull. Three years after the first examination the child expired. The postmortem revealed that the medulloblastoma involved only the frontal sinus area and left frontal lobe of the brain.

Astrocytomas

Astrocytomas are the most common of

*This paper was presented, in part, at the Interim Session, A.M.A., Denver, December, 1952.

†Intracranial Tumors of Infancy and Childhood: Bailey, Buchanan, Bucy, Univ. Chicago Press, 1939, Chicago, Ill.

the brain tumors in infants and children and comprise approximately 25 per cent of all brain tumors in infants and children, and most often arise within the cerebellar hemispheres. However, they frequently extend into the pons or into the fourth ventricle and give the diagnostician the impression that he is dealing with a primary pontine tumor, and the surgeon the impression he is dealing with a primary fourth ventricle tumor when he first explores the fourth ventricle and finds a tumor. It is the opinion of the authorities that astrocytomas are the most favorable brain tumors of infants and children for surgical excision. When astrocytomas are located in the cerebellar hemispheres and are cystic, drainage of the cyst in addition to removal of the associated mural tumor will usually effect a complete cure. These tumors do not respond favorably to irradiation therapy.

CASE REPORT

J. R. was a 6½-year-old female when first examined because of staggering gait, vomiting, and "squinting." The birth history and development were normal. Three months before examination she became fussy and irritable and vomited at breakfasts. Two months previously she began "squinting" and was examined by an optometrist who prescribed glasses. One month before she began to stagger. All symptoms progressed and on examination she had increased right extremity reflexes, decreased left finger-nose-test, ataxic gait with Rombergism. Fundi revealed bilateral chronic choked discs so cerebrospinal fluid studies were not done. X-rays of the skull revealed a definite thinning of bone over the left cerebellar hemisphere. The diagnosis was expanding left cerebellar lesion. A suboccipital craniotomy was done and a left cerebellar cyst was evacuated and the wall of the cyst and an associated mural tumor were excised. The last information obtained, two and three-quarter years postoperative, revealed she was well and going to school.

Ependymomas

Ependymomas comprise anywhere from 2.5 to 7 per cent of the intracranial tumors of infancy and childhood and are most frequently found in the region of the fourth ventricle. They are noncystic, often contain calcium, and because of location they produce early signs of intracranial hypertension with headache, nausea and vomiting. The cerebellar symptoms and signs may not be outstanding. Usually they arise from ependyma of floor of fourth ventricle and surgical removal is not only difficult but hazardous. A bony decompression alone

may permit survival for years. The prognosis is ordinarily not good.

CASE REPORT

Data was available for first three and one-half of six years following removal of fourth ventricle tumor from a 9½-year-old girl who had had for one year pre-operatively symptoms of vomiting, dizzy spells, ataxic gait, frontal headaches, blurred vision, numbness of left arm and leg and buzzing left ear. She was operated and had a fourth ventricle ependymoma removed. Postoperatively she had left cerebellar signs which decreased with each successive examination. At the time of last communication, three and a half years postoperative, it was reported that she had shown steady improvement, had attended school regularly, and complained only of blacking out with sudden activity or bending over.

Pontine Tumors

Pontine tumors in children are not uncommon. Bailey, Buchanna, Bucy reported that 15-20 per cent of all brain tumors in children are primarily in the pons, although reports of cases are rare. Pontine tumors usually present diagnostic problems but usually the cranial nerves are involved on one side and the long fiber tracts to extremities and trunk on the other side. However, the cranial nerves and extremities may be involved even on both sides. Pontine tumors commonly destroy external ocular muscle nuclei and the patients lose power to move eyes so the eyes become fixed in a neutral position. Cerebellar signs and/or corticospinal tract involvement may be early and thus mislead examiner as to location. As the tumor grows there is often a change of personality—for the worse, and only late in the course of the disease do patients develop increased intracranial pressure. Although the common primary pontine tumors are spongioblastoma unipolare, other cell types do occur. Other gliomata originating in the cerebellum or fourth ventricle may invade pons and produce pontine signs, but those tumors that originate from extra-pontine tissue and invade the pons usually produce primary cerebellar signs and increased intracranial pressure earlier. The prognosis in pontine tumors is uniformly poor. Excision of the tumor is impossible. Ventriculo-cisternostomy is only a palliative procedure, and x-ray therapy is of no benefit.

CASE REPORT

L. O. was a 5½-year-old female who was first examined because of headaches, dizziness, stag-

gering gait, inability to focus eyes, and a stiff neck. The birth history and development were reported normal. About four to five months before examination she began to complain of occasional occipital headache. For two to three months parents had noticed that while walking she steadied herself by holding to objects, and for one month she had complained of dizziness. The headaches and incoordination became more pronounced and for one week she had vomited. Examination revealed a very precocious, irritable, and negativistic child with a slight left facial weakness, right lateral rectus weakness, slightly ataxic gait, with a tendency to veer to the left. The fundi were negative. X-rays of the skull were negative. Lumbar cerebrospinal fluid examination was negative and the pressure was 9 cm. of H₂O. It contained no cells, and only 17 mg. per cent total protein. At first the diagnosis was difficult because signs varied from day to day. Finally manifestations of pontine tumor were plain, i.e., gaze became fixed in neutral position and permanent right cranial seventh weakness developed along with dysphagia, dysarthria, and inability to stand without falling. She later developed bilateral cranial seventh nerve weakness and respiratory failure and died. The postmortem revealed slight internal hydrocephalus of lateral ventricles, marked internal hydrocephalus of the third ventricle, and a marked enlargement of the entire pons—"hypertrophy of the pons" as the old writers termed such a lesion. It was obvious there had been compression of the third, fourth, fifth, sixth, seventh and eighth cranial nerves due to the enlargement of the pons. The tumor had invaded the cerebral peduncles and had compressed the fourth ventricle to a mere slit. Microscopic studies revealed spongioblastoma multiforme.

Dermoids

Dermoids and other congenital lesions of posterior fossa are very rare. The following case is probably more interesting because the symptoms and signs produced were probably not all due to the primary congenital lesion, but to the very large cerebellar abscess which complicated the case.

CASE REPORT

L. B. was an 8-months-old female who was referred because of retarded development and abnormal enlargement of head. Birth history was normal except that baby required oxygen occasionally during first week of life, and when first examined had a small "bump" on back of head. The baby had developed so that she sat alone and "tried to stand" before onset of present illness. Four months before examination she had pneumonia, following which she remained irritable. About three months before examination she had several febrile episodes with nausea, vomiting, and loss of appetite, all of which were thought due to "teething." About three weeks before examination the "bump" on the back of the head drained pus and for two weeks the fontanelle had bulged, and she kept her head "rotated to the left and drawn back" and her temperature ranged from 101-102° F (R) daily. For one week she had been lethargic, seemed to have a photophobia and more recently, stared as if blind. On examination the baby was unable to sit, had no teeth and no obvious vision, had a left

internal squint, and (?) left facial paresis. The "bump" in the mid-occipital was indurated, reddened and a small amount of purulent material was expressed on pressure. The anterior fontanelle was tense and bulging, the O.F. circumference was 45.7 cm. or about 1 cm. greater than average for her age. The chest circumference measured 39 cm. or about 6 cm. less than for her age so that her head was much larger in proportion. Fundi revealed bilateral choked discs. Temperature was 100 (R) and the neck loose. X-rays of the skull revealed separation of suture and a slit-like translucence in the mid-occipital area. Blood sedimentation rate, 64 mm. per hour. Wbc numbered 21,600 with 76 per cent polys, 22 per cent lymphs, 2 per cent monos. Ventricular fluid pressure was 55 cm. and contained 1 poly, 28 lymphs per cubic mm., 57 mg. per cent sugar, and 55 mg. per cent total protein. Diagnosis was un-localized expanding intracranial lesion—probably occipital or posterior fossa subdural abscess. In order to locate the lesion, ventriculography was done which revealed internal hydrocephalus involving both lateral and third ventricles, thus indicating a space-occupying lesion in posterior fossa. A suboccipital craniotomy was done. The scalp sinus was followed through the skull diphysence to the dura where it was attached. Sub-adjacent to the attachment of the sinus tract to the cerebellar dura there was a large subdural collection of purulent material which spread over the posterior and superior surfaces of the cerebellum. There was no evidence of walling off of the infection by capsule formation. In the center of the exudate there was a mass of hair and sebaceous-like material. During the operation the baby's condition suddenly became critical and she expired. Postmortem examination revealed no other congenital defects. The dermoid of posterior fossa with associated dermal sinus tract and subdural abscess were cause of baby's symptoms and signs.

Supratentorial Tumors

Supratentorial neoplasms in children, although much less frequent than in adults, are none the less remarkable. Cerebral hemispheric neoplasms occur in the form of the meningioma, neurofibromata, glioma, sarcomata. In the series of Bailey, Burchana and Bucy the most common type of cerebral tumors in children were the meningioma which microscopically resembled sarcomata and which tended to invade cerebral tissue which was unlike those found in adults which as they grow push aside the cerebral tissue and do not invade.

Pituitary Tumors

Of the parasellar tumors the pituitary tumors, both the chromophobe and eosinophilic adenomas are unusual and impressive in children. The chromophobe tumors produce symptoms and signs like chromophobe adenomas in adults, i.e., if large enough they produce increased intracranial pressure in addition to the so-called "neigh-

borhood signs" from pressure on the optic nerves or chiasm which cause either decrease in visual acuity and bitemporal perimetric visual field alterations and/or endocrine changes. In prepuberty males there is usually obesity, lowered BMR, and in post-puberty males there is female distribution of pubic hair, and lack of sexual development. In females there is amenorrhea and a male distribution of pubic hair, obesity, low BMR and the like.

CASE REPORT

Chromophobe Adenoma of Pituitary: R. S., a 14-year-old colored boy, was referred because of pain in the back of neck, in shoulders, and arms. Two years previously he had transient periods of diplopia and written words "ran together." A refraction helped him and he was without complaints until two weeks before he was referred when again pain started in the neck, etc. He was first hospitalized for "polio" but he had no fever and spinal fluid pressure was reported to be 50 mm. mercury and fluid contained only one lymphocyte, and 37 mg. per cent total protein and cultures were negative. On admission to Children's Hospital, Denver, it was noted that his weight was 83 pounds, that his height was less than for his age. Blood pressure was 110/80 and he had a faint apical systolic murmur. Neurologic examination was negative. O.D. vision was 20/40 and O.S. vision was 20/25. Both optic discs were elevated one diopter. Perimetric field examinations revealed a complete loss of temporal field of vision in the O.D. and partial loss in upper temporal field of vision in the O.S. X-rays of the skull showed ballooning of the sella, and slight separation of the sutures and convolutional markings of inner table of the skull. Lumbar spinal fluid was under 13 cm. of water pressure and contained 1 lymph, and 55 mg. per cent total protein. Wassermann was negative. The glucose tolerance test revealed fasting blood sugar of 72 mg. per cent; at one-half hour it was 212 mg. per cent; one hour, 297 mg. per cent; two hours, 140 mg. per cent; three hours, 125 mg. per cent. The one-hour urine specimen only had a green reduction of Benedict's solution. BMR was (-21).

The most reasonable diagnosis was pituitary tumor so a right transfrontal craniotomy was done and an intracapsular enucleation of large chromophobe adenoma of pituitary was effected. The patient withstood surgery well. He had no symptoms of hypopituitarism postoperatively, and was given 6000 r. of irradiation to the tumor area and this he tolerated well. One year post-operative the perimetric visual fields were normal and visual acuity was 20/20-1. Five years later (June, 1952) an announcement of his high school graduation was received, and his health reported "good."

The eosinophilic adenomas of the pituitary in children are growth-stimulating and growth-maturing tumors.

CASE REPORT

Eosinophilic Adenoma of Pituitary: C. K. was an eight-year-old white female who was first admitted to Children's Hospital in March,

1948, at the age of 5 years with a history of vomiting for three months and repeated episodes of tonsillitis. It was stated that she had cerebrospinal meningitis in November, 1947, and apparently made a complete recovery with no sequelae, but gained thirteen pounds in the following five months. During this time periodic vomiting occurred, usually at meals and not preceded by nausea and not projectile in character. Examination revealed a well-developed, alert, cooperative girl weighing 67½ pounds, and measuring 58½ inches in height. Examination was negative except for mucopurulent nasal discharge and enlarged cryptic tonsils. Fasting blood sugar was 91 mg. per cent. Urine and serology negative. Spinal fluid was under initial pressure of 100 to 150 mm. of water, and contained 8 lymphs, 33 mg. per cent sugar and 28 mg. per cent total protein. G.I. series was negative. The hospital course was uneventful and the child was discharged on the sixth hospital day. The cause of vomiting was undetermined. She was again admitted to Children's Hospital on April 16, 1950, with a history of steadily increasing height and weight, gaining twenty, fifteen and ten pounds, respectively, in the preceding three years. In the six months prior to readmission she had developed reddish striae on her hips and legs. She had attended school since September, 1948, and was an "A" student. One morning in January, 1950, she was found in bed having generalized jerking of extremities. She was unresponsive, eyes were rolled upward, and she was biting the lips and tongue. On February 18, 1950, she fell out of bed when she had another grand mal seizure. The night prior to the last admission she had a similar episode with jerking, more in the left hand and arm. Episodes of being "scared and weak" during the preceding six months were described. During the preceding year she had developed a small amount of pubic hair, but no noticeable breast enlargement and no menarche had appeared. She gradually lost her appetite and she had become more uncooperative and restless in the recent weeks. Blood pressure was 120/84, height 63 inches, weight 109½ pounds and she appeared to be 12 years of age, rather than 8, but acted like a 5- or 6-year-old. She was irritable and uncooperative. She had a dull facial expression. Striae were scattered over both hips and on the legs. Pupils were round but left was 1 to 2 mm. larger than the right and it reacted to light and accommodation sluggishly. The funduscopic examination was negative. Vision O.D. was 20/40 and O.S. 20/70. Examination of visual fields revealed bitemporal hemianopsia. Left triceps and biceps reflexes were more active than the right. Laboratory examination revealed blood sugar of 96 mg. per cent and basal metabolism was (-26). Lumbar spinal fluid examination revealed: Initial pressure 150 mm. of water, sugar 53 mg. per cent, total protein 43 mg. per cent, chlorides 776 mg. per cent, one lymph; Wassermann, negative; gold curve, negative. The serum cholesterol was 289 mg.; glucose tolerance test showed a delayed curve. X-rays of the skull showed the right anterior clinoid sharpened and atrophied while the left appeared normal. The floor of the sella thinned while the dorsum was thin and atrophied and sella slightly ballooned. The cranial sutures were not separated. Both optic foramina were larger than average and the right in particular showed poorly defined margins. There was unusually great development of the sinuses and the mastoid air cells for an 8-year-old. There was no doubt that this child had a parasellar lesion. The signs and symptoms indicated that it

was an eosinophilic adenoma of the pituitary so a right transfrontal craniotomy was done. A large cyst located anteriorly and inferiorly to the chiasm was evacuated of its degenerated contents. She reacted following surgery but her condition deteriorated in a matter of hours and she expired one day postoperatively. A postmortem examination revealed extension of the eosinophilic adenoma into the hypothalamus and into the third ventricle.

Other Parasellar Tumors

Craniopharyngioma, glioma of optic chiasm, aneurysms about circle of Willis, tumors of the hypothalamus and third ventricle are other lesions in the proximity of the sella turcica producing many of the

symptoms that primary tumors of the pituitary produce. Each, however, has some differentiating symptoms and signs that should help with the diagnosis.

Summary

Brain tumors in children are rather common lesions. They predominately occur in the posterior fossa in the cerebellar hemispheres, in the fourth ventricle or in the pons, and the cell type is predominately glial. Most supratentorial brain tumors in children are located in the tissues around the sella turcica. The cell types are varied.

Surgical Management Of the Aged*

HIGH surgical mortality in the elderly patient is ever present as a problem to all of us. Despite all of the scientific advances in recent years, the mortality resulting from surgery in the aged remains too high. A recent study at the General Hospital in Kansas City, Missouri, shows that surgical mortality in the aged is three times greater than it is in the younger age groups.

TABLE 1
Mortality in General Surgery, 1952

	Mortality	Operations	Deaths
Over age 65.....	15.3%	301	46
Under age 65....	5.15%	645	33

Mortality: All those who died subsequent to surgery during the same hospitalizations, traumatic cases deleted.

In an effort to find some solution to this problem, we carried out a critical analysis on the hospital records of all elderly patients who died subsequent to surgery during 1952. This study forms the basis for some practical suggestions for the management of the elderly surgical patient.

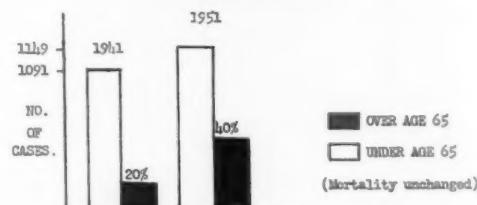
* The material for this paper was gathered from the Surgical Department of the Kansas City General Hospital, Ralph Coffey, M.D., Director.

ALBERT WOLFSON, M.D.
Pueblo, Colorado

Preoperative Evaluation and Management

Age: It is quite evident now that chronologic age in itself is no longer the important factor in surgical mortality. During the last ten years, we have doubled the number of patients over 65 years of age who are considered candidates for major surgery.

TABLE 2
Age Groups Compared With Total Major
Surgical Procedures



The real limiting factor now is our ability to evaluate and correct the physio-pathologic deficiencies in the aged. It is apparent to us that old people are able to tolerate surgery well if their various deficiencies are properly corrected. It is common practice to allow symptomatic disease in the aged go untreated when it is amenable to cure

by surgery. This is especially true of hernias and disease of the gallbladder. The aged are frequently considered poor surgical risks because of hypertension, arteriosclerosis, or compensated heart disease. However, we feel that these diseases do not prohibit most elective procedures if the patient is properly managed. Great risk to the elderly patient comes when he must have surgery as an emergency procedure. The hernia that strangulates or the gallbladder disease that progresses to jaundice may result in what might have been an avoidable death.

There is seldom the occasion that would require rushing an aged patient to the operating room. A failure to delay surgery long enough to correct physiologic deficits and completely evaluate the aged patient may prove disastrous. The time taken to correct a disturbance in hydration or blood volume will make the critical difference between life or death. The additional time will allow for more careful evaluation which may change the extent and course of the contemplated surgery.

Fluid and Electrolyte Deficits: Chronic deficiencies in fluid and electrolytes may exist without symptoms. The resulting depleted physiologic reserve makes these patients poor surgical risks. Their lack of symptoms is made possible by compensatory mechanisms in the lungs and kidneys. In making the diagnosis of chronic fluid and electrolyte deficiency, the best source of information is a detailed history in regard to intake and output of food and fluids. This information combined with the findings on physical examination will be most valuable.

Examination of the depleted patient will reveal the following: lack of moisture in the axilla and groin, dry mucous membranes inside the lips and under the tongue, dry conjunctivae, transient mental confusion, or perhaps a recent change in personality. The skin in the aged is not a reliable guide as to water and electrolyte balance. The chronically depleted patient may have relatively normal serum sodium and potassium levels before corrective

therapy. Oral replacement of the deficits is preferable to the intravenous route. If intravenous solutions must be used, glucose in distilled water is worse than nothing. It not only dilutes the circulating electrolytes, but it produces a diuresis. The diuresis results in further depletion of the sodium, chloride, and potassium stores.

Physiologic saline is not the solution of choice, because it causes a shift of sodium into the potassium-depleted cells. Since the kidneys are not able to conserve potassium, there is loss of potassium into the urine and further depletion of the potassium stores. The hypopotassemia already present is aggravated in this manner. Darrow's solution is a good corrective solution and is commercially available through most sources. Its composition is as follows:

TABLE 3
Darrow's Solution

Sodium	4.0 gms. or 121 m. eq./L
Chloride	5.9 gms. or 103 m. eq./L
Potassium	2.6 gms. or 35 m. eq./L

If the work-up reveals the patient to be in alkalosis, as is so frequent in the poor risk aged patient, ammonium chloride can be given in addition to the Darrow's solution. It is usually prepared in a 2.14 per cent solution or 21.4 gms. (400 m. eq.) per liter. One gram of calcium gluconate may be beneficial to prevent tetany when alkalosis is severe. The correction of the deficits should be accomplished over a period of days whenever possible.

Blood volume: Elderly patients having lowered blood volumes are very susceptible to shock even under minimum stress. Their wound healing is poor. They tolerate anesthesia poorly. They have a high incidence of postoperative complications and mortality. A very appropriate term, "Chronic Shock," has been applied to such patients by J. H. Clark and his associates. This state of "Chronic Shock" is characterized by the following: weight loss, reduced blood volume, and an increased susceptibility to shock.

An appreciation of this concept is one of

the most important new developments in the field of surgery in recent years. Application of the concept by correction of blood volume deficits will do much to reduce mortality and morbidity in the aged poor risk patient. This belief has been well substantiated in a controlled study by C. A. Beling. Our experience certainly confirms their conclusions.

Red blood counts and hemoglobin studies while generally of value may be misleading in the poor risk patient. The relative red cell concentration may appear normal in the count; however, the total red blood cell mass may be deficient the equivalent of one or more liters of whole blood. Although the Evans Blue Dye determination of blood volume is a valuable aid, our experience has shown that it like all laboratory tests should be interpreted in light of one's clinical evaluation of the patient. Normal values in the aged have not been well worked out. A review of the literature regarding this problem emphasizes the fact that our knowledge of the hematologic system in the aged is still incomplete and inadequate. Blood volumes should be restored to reasonably normal values before surgery.

If the surgeon is confronted with a situation where he cannot obtain a blood volume determination, the following rule published in recent Lahey Clinic Bulletin by F. G. Jensen will serve as a valuable aid: Blood volume deficit = 40 c.c. blood/pound of weight loss below estimated normal weight.

For convenience of the reader, the following table is the average normal values for blood volumes as determined by the Evans Blue Dye determination:

TABLE 4

Total blood volume.....	82.0 c.c./kg
Red cell volume.....	36.5 c.c./kg
Plasma volume.....	45.6 c.c./kg

In our experience these values seem a little too high for most elderly people. Until normal values in the aged are more carefully worked out, these values can serve as a guide. One need not fear to transfuse elderly people to correct blood volume def-

icits. In the depleted patient, as much as 1,000 c.c. of blood may be given daily. If the administration is slow, overloading will not occur even in the patient with moderate cardiac disease. One should remember to include the amount of sodium in the sodium citrate of the administered blood in his calculation of total sodium administered.

Urinalysis: The value of this simple test is often underestimated. Albuminuria and renal casts, especially when associated with lowered and fixed specific gravity, are serious findings. It may serve as a warning of the absence of renal reserve. Although albuminuria is a common finding in the elderly patient (40 to 50 per cent of control groups), 77 per cent of our mortality group had albuminuria preoperatively.

NPN—CO₂—Blood sugar: Because one cannot suspect from examination of the patient or other routine tests that these may be abnormal, we feel that they should be studied routinely in the poor risk patient.

Cardiac and pulmonary reserve: The depleted physiologic reserve brought about by the degenerative changes present in the aged may not be evident until the stress of surgery. In aged patients with poor cardiac and pulmonary reserve, there is a retention of CO₂ in the blood which causes a rise in the HCO₃ level. The effect of this is to cause a shift of chloride and potassium out of the cells. The result is the familiar combination of hypochloremia, alkalosis, and hypopotassemia. If the defect is severe, weakness, apathy, anorexia, abdominal distention, and ileus may result.

Glucose and saline solutions intravenously will make the patient worse. They bring about a further shift of sodium into the cell with a resulting intracellular edema. Potassium chloride orally and intravenously, in addition to the hypotonic saline, is the treatment of choice. Amounts of potassium chloride up to 9 gms. (120 m. eq.) a day may be required in the depleted patient.

Nutritional deficits: The majority of aged patients have some degree of nutritional deficits. If it is discovered that the corrective diet is not being eaten, we resort

(Continued on Page 510)



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250 mg.
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LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* PEARL RIVER, N. Y.


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(Continued From Page 507)
to the use of the small plastic (one-eighth-inch) nasogastric tube. In contrast to the standard rubber Levine tube, the small plastic tube is well tolerated. It can be used for weeks with minimum discomfort. It offers an easy way to give the necessary supplemental mixtures to the patient who is not able to take them.

The maintenance or production of a positive nitrogen balance may not occur despite adequate oral intake of food without active ambulation. Needless to say, sitting in a chair is not active ambulation. It may be more harmful than bed rest because of the circulatory stasis resulting from dependency of the feet.

There is frequently in the aged a state of lowered tissue metabolism. In selected cases, small doses of thyroid extract may improve nitrogen balance.

The use of testosterone propionate to elevate mood and improve nitrogen balance is a valuable adjunct in supportive therapy. The high incidence of carcinoma of the prostate in aged males warrants some caution in the use of the drug. Quiescent carcinoma might be activated by its administration.

Psychic factors: The doctor-patient relationship is of special importance. Patience, firmness, and honesty, combined with an air of optimism, may be the determining factors in a successful procedure.

Problems Arising During Surgery

Anesthesia: Our study revealed no correlation between the type of anesthetic agent and mortality. The safe anesthetic is one which will avoid shock and prevent hypoxia and hypotension.

Blood loss: The aged patient is benefited most when the blood is replaced as it is lost. F. A. Coller and others who have made studies of blood loss in surgery have reported average blood loss as follows:

TABLE 5 Average Blood Loss in Surgery	
Thyroidectomy	373
Radical Mastectomy	808
Comb. Abd. Per. Resect.	410
Biliary Tract	594
Gastric Resection	599

Those who have made careful studies emphasize that the amount of blood lost is always greater than the surgeon suspects. When the incision is made, blood replacement should begin at once in the patient with poor reserve. It should be administered according to the loss as it occurs.

Duration of surgery: The dictum that rapid surgery is no longer necessary is a poor one to follow in the aged. All efforts should be directed toward making the procedure simple, rapid, and associated with minimum trauma.

Problems Arising After Surgery

Early postoperative period: If no recovery room is available, the surgeon must assume the active responsibility for this most critical time. It is in this period that shock is most common. The simple act of establishing a clear airway, administering oxygen when necessary, or seeing that the fluids are still running after the move to the room are of obvious importance. This often seems like an anticlimax to an interesting procedure. Nevertheless, we found that it is the accomplishment of these simple tasks that may assure success instead of a mortality.

One of the big problems is the avoidance of hypotension. Hypotension results in reduced blood flow. The resultant hypoxia may cause renal tubular degeneration and be followed by lower nephron nephrosis. In the heart it may be the cause of an infarction or a disturbance of rhythm.

Postoperative period: It is a common surgical practice to restrict saline solutions from the postoperative patient for about forty-eight hours. This is not always a valid principle in the aged. Elman has shown that old people under stress of surgery do not conserve salt as do younger patients. By comparison, the aged excrete twice as much salt in the urine.

For reasons not clearly understood, marked disturbances in electrolyte levels may occur without external loss. With peritonitis, there is a loss of electrolytes into the peritoneal cavity. These electrolytes are physiologically unavailable to the pa-

tient. In situations of severe trauma, Elman has demonstrated that patients excrete as much as 78 per cent more potassium than they do normally. The aged cannot tolerate even minimum depletion of their electrolyte stores. This depletion may be the cause of hypotension, ileus, mental confusion, and a chronic shock-like picture.

Treatment should include the use of hypertonic saline (3 to 5 per cent) in the amount of 250 c.c. at repeated intervals. As much as 9 gms. or 120 m. eq. of KC1 may be required in twenty-four hours. Such vigorous measures demand accurate diagnosis of the deficiencies and careful follow-up during therapy. Improper use of these electrolytes may easily precipitate acute congestive failure in the aged patient.

It is a well recognized principle that potassium salts should not be given in the presence of oliguria or anuria. The exception of this principle is found in the markedly depleted patient. Anuria may be caused by this deficiency in electrolytes. It is in these patients that potassium must be given.

Atelectasis was found to be the most common source of fever in the first forty-eight hours postoperatively. Iodides orally and intravenously in conjunction with aminophylline are very useful drugs in the treatment of atelectasis. It is difficult to get the aged patient to cough properly. We have found it helpful to have the patient lie prone in bed with his head over the edge. Then we firmly percuss his chest while encouraging him to cough deeply. This technic is quite successful in most instances. In the occasional case where the patient is so weak that he cannot cough, we do an early

tracheotomy to be certain that the secretions are removed.

Basic postoperative requirements: Our guide for the average daily postoperative requirements include the following:

TABLE 6
Basic Postoperative Requirements

500	c.c. Normal Saline
3.0	gms. (40 m. eq.) of KC1
100	gms. glucose
	vitamins
2,500	c.c. fluids/24 hrs. (approximately)

These are supplemented by replacement of biliary, gastric, or other drainage with equivalent amounts of Darrow's solution. Estimated losses from perspiration or lungs resulting from fever should be replaced by hypotonic saline. The minimum acceptable urinary output in the aged should approach 1,000 c.c./24 hours. This amount is necessary because of the frequency of poor renal concentration.

Causes of death: The most frequent causes for death in our study were renal failure, cardiac failure, and infection present as pneumonitis or peritonitis. In many cases, it was difficult to ascertain with certainty the exact cause of death. We therefore made no attempt to come to any statistical conclusion as to cause of death.

Conclusion

It is evident to us that surgical mortality in the aged can be reduced without awaiting new medical discoveries. The problem simply is one of recognizing and implementing known basic surgical principles.

These principles have been reviewed and suggestions offered for the management of the elderly surgical patient.

New Addition to the Film Library

Where and how the physically handicapped person can be fitted for the business world is the theme of a new film which has been added to the library of the AMA's Committee on Medical Motion Pictures. "America's Untapped Asset" was originally sponsored by the President's Committee on Employment of the Physi-

cally Handicapped. Its principal aims are to encourage employers to hire the physically handicapped and to illustrate some of the many types of work in which the handicapped person can work just as effectively, if not even more effectively, than the normal person. There is no service charge for this 13-minute sound, black and white film.

*Functional Disorders of the Intestinal Tract**

H. IVAN SIPPY, M.D.
Chicago

THE concept of irritable bowel as a frequent basis for abdominal distress and allied symptoms was long ago emphasized in the teaching of B. W. Sippy, A. F. Sippy, and others associated with them. R. C. Brown¹, F. C. Val Dez², and E. N. Collins³ have, in addition, contributed to the literature articles elaborating on this subject. Nevertheless, patients in undiminished numbers continue to reveal in their histories that functional disturbance of the intestinal tract has not been given much consideration by their medical advisors.

The frequency of these disorders, and the ease with which they can usually be detected and benefited, arouse curiosity as to the reasons for their neglect. It can only be concluded that they have been insufficiently described and emphasized in medical teaching, or that the commendable zeal for organic disease diagnosis often obscures this more common functional basis. Another possible cause for this neglect may be a widespread lack of inclination by the profession to undertake the tedious process of bowel management, or a lack of understanding of the principles of this treatment. If so, it is justifiable to attempt further clarification and description of methods which have proved successful in the management of patients with the irritable bowel syndrome.

The term "irritable bowel" or, more particularly "irritable colon," has, I have found, been subject to the erroneous interpretation that only the colon is concerned in these conditions. Unquestionably, the small intestine shares in the disturbance present in this syndrome, and should be included in all considerations of diagnosis and treatment. Physiologically and anatomically, the

small bowel is fully as vulnerable as the colon to instability and derangement. Both are autonomic organs whose activities are merely regulated through their extrinsic sympathetic and parasympathetic nerve supply. These nerves have connections with higher brain centers, as proved by the production of contraction and relaxation of both the small and large intestine by experimental stimulation of areas of the cerebral cortex. Longitudinal and circular muscular layers, arranged in a spiral pattern, carry on rhythmical contractions and peristaltic movements, exhibiting no fundamental differences in the small and large bowel except in the rate of activity, which is, of course, much slower in the colon. Between these muscular layers, and in the submucous tissues, are the nerve plexuses of Auerbach and Meissner, which contribute to the local regulation of both the small intestine and the colon.

Disturbance in the physiology of the intestinal tract is, of course, most likely to occur in those persons who, by hereditary or racial endowment, or by lives of increased nervous tension, or both, have a strong tendency toward instability, especially of the gastro-intestinal system. Few of us have failed to experience the abdominal "butterflies," the nausea, the sensation of fullness, or the diarrhea, which may be associated with extremes of emotional stress. Multiplied and sustained, such symptoms undoubtedly represent the pitiable plight of the victim of intestinal dysfunction, based on nervous hyper-irritability.

The more forthright basis for bowel irritation represented by cathartics, large enemas, or faddish diets, has perhaps become less important in recent years, as understanding of the evils of these practices has become more widespread. However, there still are, and probably always will be,

*Read at the Annual Meeting of the Wyoming Medical Society, Casper, Wyoming, June 12, 1953. The author is Assistant Professor of Internal Medicine, Northwestern University Medical School.

far too many persons with more intestinal enthusiasm than intestinal fortitude in the true sense, who grimly pursue a goal of frequent bowel movements with no allowance for individual variation in physiology, amount of residue in the diet, degree of physical activity, or other factors which are not subject to standardization. Over-stimulation of the bowel by these measures usually results in abnormal emptying of the distal colon, which is then unlikely to refill the rectum by the following day. The energetic goader of the bowel then decides that he is constipated, and repeats his favorite cathartic or colonic flushing, setting up a vicious circle of over-stimulation. This is often carried on for incredible periods of time, despite all the usual manifestations of intestinal rebellion resulting from repeated irritation of the bowel wall. This may be carried to the extent of producing a true catarrhal colitis caused by flooding the liquid contents from the upper bowel through the unadapted colon.

Fermentation, in the colon, of excessive amounts of carbohydrate, may, by such end-products as acids and carbon dioxide, set up a chemical irritation and gaseous distention. This can result in marked borborygmus, flatulence, and frequent spongy, explosive yellow stools which are acid to litmus paper and contain an increased number of starch granules. When of this severity, the condition can be properly termed "fermentative colitis." No form of bowel disorder better illustrates the involvement of the small intestine, in that the incompletely digested and absorbed fermentable carbohydrates have reached the colon because of hypermotility of the small bowel. Achlorhydria is not uncommonly present in patients with fermentative colitis.

In addition to the three sources of bowel dysfunction just discussed—namely, nervous irritability, abuse by cathartics or enemas, and fermentation—there are numerous accessory or precipitating causative factors. These include chilling (either by external exposure or ingested material), infections, (especially the toxins of respiratory infections often misnamed "intestinal flu"), emotional crises, fatigue, endocrine dis-

orders, allergic reactions, and excessive intake of highly laxative foods such as cabbage, sauerkraut, corn, and many fruits or fruit juices.

Whatever the etiologic factors, the leading symptom of a functional bowel disorder is usually abdominal distress. This tends to be variable in location and degree, and may radiate to other areas of the abdomen, or to the back. When in the left upper abdomen, it sometimes radiates upward into the chest and arouses suspicion of a cardiovascular source. The distress is intermittent or remittent, with a tendency to recur frequently over prolonged periods. It appears most commonly immediately after eating, and in the morning before breakfast. Descriptions vary from vague discomfort and sensations of fullness, all the way to violently cramping colic. Some relief is usually obtained by applying heat to the abdomen, or taking hot foods and drinks, and by defecation, belching, or the expulsion of flatus.

Diarrhea will result when the physiologic disturbance takes the form of exaggeration of normal mass peristalsis. The resulting stools will be very soft formed, mushy, or watery, depending upon the degree and persistence of this abnormally increased peristaltic action. The nature of the diarrhea in a fermentative process has already been described. Irritation of the bowel lining by severe persistent diarrhea frequently results in true colitis which is usually of brief duration.

Constipation, the apparent opposite of diarrhea, may in these conditions represent the reaction to a similar physiologic disturbance, in that the fundamental error is muscular over-contraction. Instead of an increased wave of consecutive peristalsis, it may, in this instance, be the persistent muscular spasm of a segment of colon, which thus interferes with the conveyance of bowel contents toward the rectum. Stools resulting from this "spastic constipation" are characteristically hard and of small caliber, due to dehydration during the delayed progress through the colon, and to molding of the formed feces in an over-contracted descending or sigmoid colon.

Loss of appetite and nausea disturb many

sufferers from the irritable bowel syndrome, but vomiting is uncommon except during acute transitory exacerbations.

Borborygmus and flatulence are frequent manifestations of the erratic and overactive intestine, and when present to a severe degree convince the patient that he is "full of gas." In reality, he may have no more than the normal amount of gas in a bowel which is moving the contents about energetically, and perhaps concentrating them in portions of the bowel, rather than achieving an even distribution throughout.

It has been mentioned that belching temporarily relieves the distress of irritable bowel, and discovery of this apparent benefit leads some patients to develop the voluntary belching habit. In this sense only, belching may be considered one of the symptoms related to the syndrome. When frequent and persistent, such aerophagia commonly results in regurgitation of gastric contents into the esophagus with burning discomfort ("heartburn"), and the epigastric fullness and discomfort produced by over-distention of the stomach with swallowed air. In rare instances, so much air may be swallowed during the day that it proceeds into the intestine in such quantity as to cause great abdominal distention.

Numerous symptoms less directly referable to the bowel may, by reflex or emotional effects from the disturbed intestinal tract, enter the picture. These include headache, dizziness, palpitation, syncope, weakness, and even collapse.

Physical examination of a patient suffering from the irritable bowel syndrome may result in surprisingly few findings. The colon may be rope-like when palpated, especially in the descending and sigmoid parts, and tender either throughout its course or in isolated portions. Such tenderness tends to be deep-seated, and elicited only by pressure directly over the colon. A tender distended cecum is not uncommon.

Diagnosis of irritable bowel is accomplished by exclusion, and no attempt will be made here to deal with the complexities of differential diagnosis of abdominal distress. The first essential in making a

diagnosis of this syndrome is that the examiner be aware of its existence. The characteristic "internes' list" of diagnostic possibilities is apt to include everything but this most common of all causes.

Every patient who has had prolonged, severe, or recurrent symptoms of the kind mentioned in this discussion, deserves a careful, though not necessarily elaborate, investigation in addition to the thorough history and physical examination. This should include, as a minimum, a complete blood count; urinalysis; examination of stools for consistency, caliber, blood, fat, acidity, starch, parasites and ova; gastric analysis; and an upper and lower gastrointestinal x-ray study. The importance of fluoroscopy, as well as films, in the x-ray examination, needs emphasis, and I feel that the clinician derives much useful understanding of the problem by observing the fluoroscopy of his patient. Proctoscopic examination may be reserved for those with special indications, or deferred until the progress during treatment shows whether or not this is desirable.

Management of the irritable bowel patient must be so highly individualized and so flexible as to defy definite description. In no disorder is the psychologic evaluation of the patient more vital. There is no possibility of helping him unless his complaints are taken seriously, listened to in detail, and accepted as important guides to investigation and treatment.

The first, and perhaps the most important, step in treatment is the thoroughgoing diagnostic study which has excluded organic disease. When clearly and adequately explained to the patient, these negative findings can become the basis for convincing reassurance of the absence of organic disease. Not until this has been accepted is the patient ready to cooperate unreservedly in a plan of treatment for a functional disorder.

The next step in the treatment of all patients in this category is a painstaking explanation of the nature of the irritable bowel syndrome. This must be made to fit the patient and his symptoms, and must re-

sult in his clear understanding of principles as well as directives.

Dietary instructions will be much more acceptable if the patient feels that they are especially planned for him. I find it of value to write out the diet as I explain it. This is much more effective than the presentation of a printed list. Best results are obtained by taking the patient step by step, in weekly or bimonthly office visits, from his original low residue bland diet through the stages of food additions. His response to each stage determines what the next step should be.

A prefabricated set of instructions, therefore, is a most unsatisfactory means of presenting the bowel management program. Nevertheless, patients who come from a distance so great as to prevent their return, and those who are about to leave on extended travels, must have some expository document for reference. The following, setting forth details of tentative food additions as well as general principles of management, represents an attempt to cover the subject for such patients:

When there is abdominal distress of the "irritable bowel" type, OR when the stools are mushy or watery, the diet should be limited to the following foods: well cooked rice, cream-of-wheat, soda crackers or white bread (toasted if desired), soft eggs, custard, milk, butter, cream, plain jello, macaroni, American or cream cheese, dry cottage cheese, and lean meat, including fish and fowl. The residue from these foods is small in quantity and of such character as to be relatively non-irritating to the bowel. Therefore, careful observance of this diet, and of other instructions received, is likely to result in decreased distress, and formed stools within a week or ten days. Otherwise, consult the paragraph headed "IMPORTANT" below.

When the stools have remained formed for several days, and distress has practically disappeared, add to the above diet well cooked oatmeal and cream; then whole wheat or rye bread (not more than three slices daily). If the stools continue formed and distress does not recur, add a small quantity of lettuce or celery, once daily. Each new addition now and subsequently is to be dropped from the diet for the day following the first trial, to determine whether or not irritation of the bowel results.

If the stools still remain formed, asparagus or young string beans may be added once daily. As the irritability of the bowel decreases, a second daily serving of cooked vegetable may be cautiously added, in an order of selection about as follows: squash, potato, young peas, pumpkin,

beets, white turnips, parsnips, spinach and similar cooked greens. These vegetables have mechanically laxative (and therefore irritating) effects in about the order named. Those not appearing on the list are usually not well tolerated by the sensitive colon, although carrots, cauliflower, brussel sprouts, sweet potatoes and tomatoes may be attempted later.

The chemically laxative effects of fruits cause them, as a group, to be more irritating than vegetables, but it is desirable, at the stage of addition of the second cooked vegetable (Paragraph 3) to try a very small amount of orange juice, which may be gradually increased to the juice of one-half orange or one-half grapefruit. No other raw fruits can be safely used at this stage.

When it has become possible to take two or three servings of the above vegetables daily, and still maintain formed stools and freedom from distress, guarded additions of cooked fruits can be made in the following order: Prunes, peaches, apricots, berries, pineapple, plum sauce, apple sauce or baked apple. When one serving of cooked fruit is satisfactorily tolerated, a second may be tried, particularly if there is a tendency to hardness of the stool. All fruits should be promptly excluded from the diet at any time that distress appears, or the stools become mushy.

The purpose of the above regime is to restore to the sensitive colon a wide range of tolerance for moderately irritating foods, and when this has become well established it is usually possible gradually to resume a regular diet. Such severe irritants as bran, beer, buttermilk, concentrated sweets, cabbage, sauerkraut, corn, shell beans, and large quantities of raw fruits or fruit juices and ice cold drinks, should nevertheless be used with caution even after an apparently complete recovery.

Several factors other than diet have important influences on the irritable bowel. Chilling of the body, taking cold, or direct chilling of the intestinal tract by ice cold foods or drinks, are seriously detrimental. Acute infections, physical exhaustion and mental influences such as worry, fear and excitement, likewise predispose to recurrence of the symptoms of bowel irritation. Abdominal distress or mushy, watery or small-caliber stools, attributable to these causes, require the same form of management, as outlined.

Heat, in the form of the electric pad or hot water bottle, or hot drinks such as hot milk or hot water, are definitely helpful. External heat to the abdomen is recommended whenever distress or unformed stools are present, and has value during the early stages of management, even when these symptoms are absent.

Constipation, properly defined as the drying and hardening of the stools, is likely to appear after laxative foods have been excluded from the diet for a time. When there has been no bowel movement for twenty-four hours, and the

last stool was hard and dry, temporary relief from this condition should be sought as follows: At bedtime, inject into the rectum two or three ounces of slightly warmed olive oil or cottonseed oil. This is to be retained in the rectum over night, if possible, for the purpose of softening the stool. The following morning, a bowel movement is to be attempted. If there is no result a small plain water enema, of one-fourth to one-half pint, may be used, repeating if necessary.

Cathartics or large enemas are never to be taken, under any circumstances. These not only produce violent irritation to the bowel, but also remove from it the waste material which should properly remain to make up the normal bowel movement of the following day. If the oil retention enema has been neglected, and a bowel movement cannot be obtained, it may not be objectionable to use the small water enema or a glycerine suppository without the preliminary softening of the stool with oil.

Vitamins of importance are lacking in the diet of the first paragraph. Ordinarily the irritability of the bowel subsides, and the vitamin-containing foods of the subsequent paragraphs can be added, long before the deprivation of vitamins can assume importance. However, additional advice should be sought before continuing for more than a few weeks on the limited diet of the first paragraph.

IMPORTANT: Should profuse diarrhea appear or should there be no improvement after careful observance of Paragraph 1, and other instructions, for about two weeks, absolute bedrest should be instituted, with heat applied to the abdomen for periods of one hour, every alternate hour. The diet should be limited to hot gruels of cream-of-wheat, rice, or barley, made thin with water, and served in small portions at intervals of two to four hours. One or two soft eggs may be taken during the day with a white cracker if desired. When this program has been followed for two days, boiled milk may be substituted for half of each portion of gruel. On the fourth day toast and well cooked rice may be added, and then, if improvement is satisfactory, the diet of the first paragraph may be cautiously added. The stools are likely to become hard after a few

days of the gruel diet, in which case the previous instructions regarding constipation may be followed.

During the period of treatment, it is essential to guide the patient toward the concept that his condition is not a disease to cure, but rather a disturbed function to control. He learns that his best defense against future trouble is his acquired knowledge of measures which will promptly control recurrent symptoms at their onset.

Summary

Functional bowel disorders are extremely prevalent, and their recognition and treatment are grossly neglected.

Disturbances in bowel physiology may result from emotional stress, from irritating drugs, foods, or procedures, from fermentative processes, and from numerous other causes.

Symptoms of the irritable bowel syndrome may include varieties of abdominal distress, constipation, diarrhea, flatulence, anorexia and nausea.

Physical examination reveals little except a tender and sometimes rope-like colon.

Diagnosis is accomplished largely by a process of exclusion of organic disease.

Treatment must be individualized, and alterable to conform to the progress of the patient. Details of bowel management are outlined.

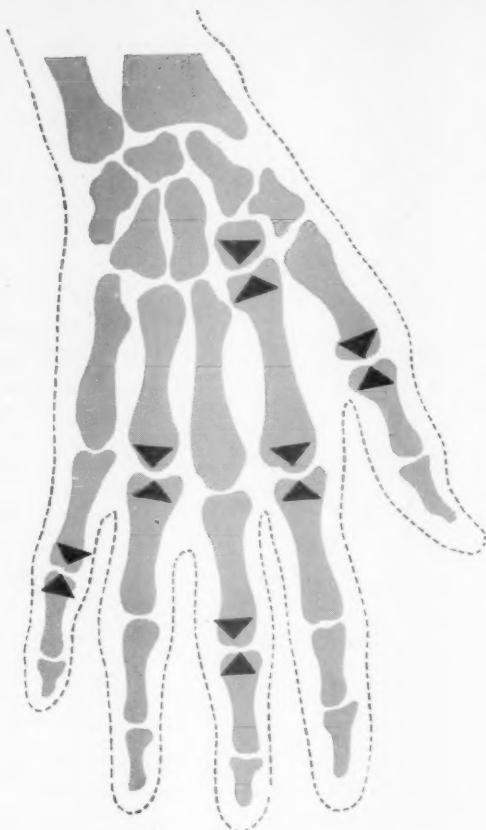
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Urinary Incontinence In the Female

HAROLD T. LOW, M.D.
Pueblo

ONE of the most embarrassing pathologic conditions in women is urinary incontinence. It carries no mortality, but the morbidity is distressing indeed, as many of these sufferers shun their neighbors, become extremely depressed, and avoid all social contacts. The causes are many and varied, the operations devised to correct the loss of urinary control are more than a few, some simple, some intricate, and none 100 per cent successful. Most authorities agree that from 15 to 20 per cent of the present day methods are unsuccessful.

There are various types of urinary incontinence, such as that due to congenital anomalies of the urinary system; epispadias, ectopic ureters, congenital lesions of the nervous system affecting nerve control of micturition, and traumatic injuries resulting in urethral and vesical fistulae. This paper will consider only incontinence of the reflex and stress type, defined as a loss of urine through the intact urethra under certain conditions which cause a sudden increase in intra-abdominal pressure as is produced by coughing, sneezing, laughing, and occasionally certain emotions. Stress or exertional incontinence may be mild in form, the patient is conscious of the escape of a small quantity of urine in any movement which entails a sudden rise of intra-abdominal pressure when in the upright position. Again it may be more severe in character and result in almost complete incontinence.

No true statistics as to the incidence are available, but it can be roughly estimated that from 5 to 10 per cent of all adult women have some degree of stress incontinence. Urge and reflex incontinence often co-exist with exertional incontinence. However, the patient with a true urge incontinence is usually forewarned of the impending loss of urine, while with reflex and stress inconti-

tence, no warning is given. By reflex incontinence I mean that loss of urine which is caused by pathologic conditions in the urethra itself which pull the intricate trigger reflex mechanisms responsible for urethral relaxation and loss of urinary control. I have proved, at least to my own satisfaction, that all stress incontinence is not due to gynecologic pathology.

Space does not permit a detailed discussion of the embryology, anatomy, and physiology of micturition and its voluntary control. In brief the present day concept of the anatomy of the female urethra and its related structure can be summarized as follows¹: The adult female urethra is a tubular structure which averages 3.6 cm. in length and is capable of dilatation to a diameter of 1.0 cm. The internal or vesical orifice of this canal lies 2.3 cm. back of the midportion of the symphysis pubis, and from there the tube extends downward and curves slightly forward to the external meatus which opens in the midst of the vestibule of the vagina 2 to 3 cm. below the base of the clitoris. In its course there is a 16 degree angle from the external to the internal orifice. In its distal two-thirds it is intimately attached to the vaginal wall. It also penetrates several muscles, striated and voluntary in character, and fascial layers which surround the urethra and constitute the external sphincter. Elastic fibers, known as the pubourethral ligaments, attach the urethra to the posterior surface of the pubic bone. These help maintain the angle at the junction of the urethra and bladder, and are of utmost importance in maintaining continence.

The internal sphincter is composed of two horseshoe shaped bundles of smooth muscle, one looped anteriorly and one posteriorly, each bundle becoming an integral part of the bladder muscle. At rest these muscle loops

are in a natural state of tonicity and close the internal orifice. Supporting structures of the urethra are muscles of the perineum and their fascias, namely the pubo-coccygeus and levator ani, bulbo-cavernosus, ischiocavernosus, fibers from superficial and deep transversus perineal muscles.

According to Hinman², despite the increased amount of research studies the exact nerve mechanism of the bladder and urethra, as well as the supporting structure, is not completely understood.

Three main pathways exist, each one with afferent and efferent fibers:

1. The hypogastric pathway, known as nerve hypogastricae, is the thoracico-lumbar sympathetic system.

2. The pelvic pathway, the nervi pelvici, is the sacral parasympathetic system. Both one and two are autonomic.

3. The pudendal pathway, nervi pudendi, is somatic in origin.

The hypogastric nerves innervate the internal sphincter as well as the muscle trigonalis with efferent motor fibers. The pelvic nerves innervate the detrusor vesicae with afferent motor fibers, and carry a great proportion of the afferent sensory nerves of the bladder. The pudendal nerves with deep perineal branches innervate the external sphincter (efferent) and the accessory urethral and perineal muscles, and supply sensory (afferent) fibers to the mucosa of the posterior urethra.

Normal micturition is essentially reflex in nature through the lumbo-sacral centers, but under normal conditions can be initiated, inhibited, or interrupted at any stage by an effort of will. Continence is not achieved by active sphincteric contraction but by the sum total of all the factors responsible for the resistance of the urethra to intravesical pressure. These factors include a normally functioning internal and external sphincter, intact muscles of the perineum, and the firm fixation of the urethra to the posterior surface of the pubes by the pubo-urethral ligaments, maintaining the proper angle at the junction of the urethra and bladder. The bladder sphincters need at least two points of fixation in order to maintain the natural

or inherent tonus of the involuntary sphincter.

Despite the above, we are fully aware that destruction of the internal sphincter alone does not always produce incontinence nor do tears or weakening of the external sphincter alone cause incontinence. We are also aware that many women with large cystoceles, urethroceles, and prolapse of the uterus do not have urinary incontinence; therefore, these mechanical causes alone cannot be responsible for all cases of incontinence. It has been postulated that pathologic conditions within the urethra may cause relaxation of the internal sphincter by reflex contraction of the detrusor and the lowering of urethral resistance. Thus, incontinence of the stress variety is achieved.

The problem of curing incontinence in the female is a dual procedure. First, all pathologic conditions within the urethra itself must be removed; and second, necessary repair of any of the other factors responsible for lowered urethral resistance must also be accomplished, including the strengthening of pubo-urethral ligaments. The reason for a 15 to 20 per cent failure of surgical procedures to cure incontinence is that most surgical operations are designed to correct only one or two of the factors responsible for lowered urethral resistance. Before any surgical procedure is undertaken it is necessary to examine and test all of the factors responsible for continence. This assumes a careful painstaking history, a general physical examination, complete urological investigation and a complete gynecologic survey.

The main factors to investigate are the adequate urethral and bladder supports, the absence or presence of pathologic urethral conditions and the proof of the 16 degree angle in the urethra between the internal and external sphincter, which is in a large measure maintained by the pubo-urethral ligaments. The effectiveness of supportive structures of the bladder and urethra can be estimated first by inspection. If the patient is asked to bear down and a marked cystocele or urethrocele is seen, it is very probable that the muscle and fascial supports are weakened. By manual examination, the

contracting power of these muscles can further be evaluated. A pathologic urethra can be satisfactorily demonstrated by urethroscopy with the pan-endoscope. By means of supine and semi-lateral cystograms the position of the vesical orifice can be determined relative to the lateral bore of the symphysis¹. If, on both at rest and straining, it is shown by cystogram that the bladder neck is posterior to the lateral bore (its normal position) then the 16 degree angle previously described is present. If the neck of the bladder is anterior to the lateral bore it is definite evidence of lack of fixation of the posterior urethra to the symphysis and indicates a vesico-urethral suspension of the Marshall-Marchetti type². If both the supportive structures and the pubo-urethral ligaments are found inadequate, a combined vaginal plastic and suprapubic vesico-urethral suspension is indicated. Before either of these surgical procedures is attempted, a pathologic urethra must be corrected. I call this type of incontinence, reflex incontinence. Fulguration of the entire vesical orifice and posterior urethra will correct this. Some strange results have followed this procedure.

It must be remembered that incontinence due to mild granular urethritis, proliferative urethritis or cysts, is not the same as urge incontinence caused by inflammation of the bladder or trigone. The same chain of symptoms are not present and no warning of impending urine loss is manifested. It may be the only factor present, or may coexist with loss of urethral support and atrophy of the pubo-urethral ligaments.

Three patients have been seen and treated by light fulguration of the mucosa with complete cure of the incontinence. The other factors were normal. One case in which a vaginal plastic had previously been performed without success was completely continent after fulguration. One case of the Marshall-Marchetti suprapubic vesico-

urethral suspension was only continent for a few weeks, following surgery but responded for weeks at a time to fulguration. In my opinion, the continence had not been achieved by producing bladder neck edema, nor by the effects of the fulguration on the glands of the posterior urethra, but by the destruction of the afferent sensory nerve terminals in the urethral mucosa, which abolished a reflex that caused relaxation of the internal involuntary sphincter, and gave these patients immediate continence. Six patients with stress incontinence, but no demonstrable pathologic urethra, and with little if any urethral relaxation, but with all showing the bladder neck anterior to the lateral bore of the symphysis, have been cured by the vesico-urethral suspension alone. One patient with incontinence who showed marked loss of urethral support, and by cystogram showed that the vesical neck was anterior to the lateral bore, has been completely cured by a combined vaginal plastic and a vesico-urethral suspension.

Summary

Stress and reflex incontinence have been described. The bladder and urethral anatomy and innervation have been summarized. Diagnostic procedures have been reviewed, and curative measures have been described with emphasis on first treating the pathologic urethra by fulguration. Indications for plastic surgery alone and vesico-urethral suspension alone, or the combination of both, have been shown. It is to be hoped that following this plan will reduce the percentage of failures in surgical treatment of urinary incontinence.

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INAUGURAL ADDRESS TO BE BROADCAST

Even if you cannot attend the American Medical Association's 103rd Annual Meeting, you will be able to hear the President's inaugural address broadcast directly from the ballroom of the Pal-

ace Hotel in San Francisco. The remarks of President-Elect Walter B. Martin will be broadcast on a nationwide radio network Tuesday evening, June 22.

Male Infertility In Marriage

ISADORE GERSH, M.D.

Denver

WHEN a couple begins to have doubts about fertility, the wife in almost all instances is the one who first consults a physician. Until the past decade she was often subjected to examinations and treatment, while the man as a possible cause of the infertile mating was usually given little consideration. Now that the role of the man in infertile marriages is generally well appreciated, unless definite abnormality in the woman is detected in an initial general and pelvic examination, the husband is studied and evaluated before further gynecologic procedures are carried out.

This report deals with the male factor. However, it must be remembered that examination of either the man or the woman alone yields only a portion of the data necessary to complete a fertility study. The final evaluation is based on fecundity of both the man and his wife. In some cases a combination of conditions in both, although minor in each of them, adds up to an infertility problem, while in others the fault will be a major or minor defect in either of the mates.

For the man to accomplish his role he must produce and deliver spermatozoa to the cervix in sufficient numbers so that eventually all barriers are overcome and one "healthy" spermatozoon ultimately penetrates and fertilizes the ovum. The purpose of the study of the male is to determine whether he is potentially capable of this performance; if he is not, to find the cause and correct the disturbance when possible.

The examination of the man includes a detailed history, a complete physical examination and laboratory studies with analyses of semen specimens. In most cases the study of the man involves no painful procedures. Sometimes special examinations such as basal metabolism, testicular biopsy

or catheterization of the ejaculatory ducts may be necessary.

History

In addition to a general medical survey, stress is placed on a history of prolonged and high fevers as well as chronic systemic diseases. Gonorrhea is of special importance if it was complicated by posterior urethritis or epididymitis. Injury or disease of the testicles is highly significant. Mumps in adulthood, because it is frequently complicated by orchitis, may result in atrophic testicular changes. When the patient has been previously married it is informative to learn if conception occurred or if the divorced mate has since had a pregnancy. Coital performance and frequency are determined. In some cases coitus may be so irregularly spaced that ovulation time is missed while in others the interval between emissions may be too short to allow for optimal sperm concentration. The patient's routine of living should be inquired into—his diet, sleep, exercise, occupation, use of alcohol and tobacco, type of underwear and sleeping clothes—for possible influence on spermatogenesis.

Physical Examination

A complete physical examination is an integral part of the study. Body development, nutrition, and endocrine status should be evaluated. Focal infections are searched for. Careful inspection and palpation of the external genitalia with emphasis on size and consistency of the testicles and epididymis may give information which will explain subsequent seminal findings. The testicle of diminished consistency will frequently reveal atrophic changes on histologic examination. In a series of 218 cases the importance of testicular findings in the physical examination was emphasized.¹ Pregnancies eventually occurred in 50.6 per cent of

the couples in which the male had normal testicles on physical examination, in 31.2 per cent where one testicle was involved and in only 10.9 per cent of the cases in which palpable abnormality in size or consistency of both testicles was noted.

Prostato-vesicular secretions are examined microscopically, preferably on more than one occasion, to determine if inflammation or infection is present.

Laboratory Studies

Minimal laboratory studies include urinalysis, hemoglobin determination, a serological test for syphilis and examination of two seminal specimens.

The Seminal Fluid. Method of Collection. To yield a dependable specimen the entire ejaculate should be collected after an interval of three to five days since any emission has occurred. The use of condom-collected specimens is mentioned only to be condemned; sperm motility is hindered by this device. Not infrequently a diagnosis of necro-spermia has been erroneously made because of this type of examination. I prefer to have the first specimen collected by masturbation in the office at the time of the initial visit; a second specimen is obtained by coitus and withdrawal three to five days later and is brought promptly to the office in a wide-mouthed sterile jar. A post-coital examination to determine penetration of cervical mucus by the sperm is made by the gynecologist at the estimated ovulation phase, when the mucus is profuse, clear and thin.

Semen Examination. Freshly ejaculated semen is a coagulum which usually liquifies in ten to thirty minutes. Average volume ranges from 2.5 to 5.0 c.c. The degree of opalescence is dependent on cellular contents; specimens with low sperm concentrations are usually watery pale. At ordinary room temperature 70 to 80 per cent or more of the sperm are actively motile the first two hours, and there are some motile sperm twenty-four hours after collection. Sperm are counted after making dilutions with a white blood cell pipette and using a hemocytometer counting chamber. Excellent sperm counts

are above 80 million per c.c.; good counts range from 60 to 80 million per c.c.; 20 to 60 million per c.c. are intermediate, and counts consistently below 20 million are considered to indicate definite deficiency. The importance of quality of sperm motility has been shown by MacLeod and Gold.² Sperm morphology is determined by studies of stained smears; normal sperm population contains up to 20 per cent abnormal forms. Increased viscosity may interfere with sperm motility and survival, and stained smears in such instances are unsatisfactory unless the mucus has been removed with a mucolytic agent such as chlorozene. Presence of cellular elements other than sperm, such as leucocytes and immature cells of the spermatogenic series, should also be noted.

Treatment

Prophylaxis. Proper management of conditions leading to disturbances in fertility is extremely important in prevention of pathologic changes. Epididymitis of the non-specific variety is not infrequently seen in the young adult man. This condition, although apparently minor, may have serious consequences; it should be adequately treated to avoid occlusion of epididymal tubules. Even if only one side is involved, and unilateral obstruction results, it will contribute to a lowered sperm concentration and may become a factor in an infertile mating. The general surgeon should avoid injury or constriction of the spermatic cord in hernioplasty. There is some question as to the adequacy of the undescended testicle even if it is ultimately brought into the scrotum; however, cryptorchidism should be corrected before puberty so that the seminiferous tubules will have opportunity to develop in their normal environment.

Those who give contraceptive advice to the newly-married should take cognizance of the fact that about 10 per cent of all marriages are involuntarily sterile. It would seem worthwhile to do minimal fertility studies before prescribing any contraceptive method for couples who have no children. If this is done, couples who might be expected to have fertility problems will be

(Continued on Page 527)

REPORT ON APRESOLINE

FROM A STUDY OF 97 HYPERTENSIVE PATIENTS¹

EFFECTIVE ANTIHYPERTENSIVE

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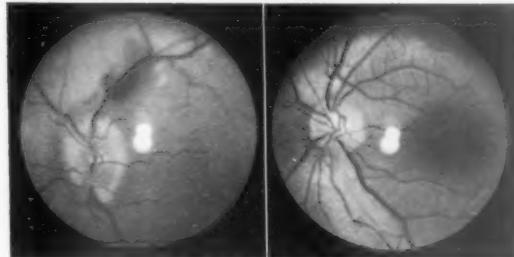


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*THE NORMAL FUNDUS (RIGHT) AS COMPARED WITH THE FUNDUS IN HYPERTENSION SHOWING EDEMA, EXUDATES, AND HEMORRHAGES (LEFT); ILLUSTRATIONS FROM "THE FUNDUS OF THE EYE"; BEDELL, A. J.: CIBA CLINICAL SYMPOSIA 4:135 (JULY) 1952. THESE ILLUSTRATIONS ARE FOR DEMONSTRATION PURPOSES ONLY AND DO NOT REPRESENT APRESOLINE-TREATED PATIENTS.

C I B A



ALLEVIATES HAY FEVER, OTHER RESPIRATORY ALLERGIES

The above photos show a case of allergic rhinitis before and after Pyribenzamine therapy. Many such cases have been reported in the literature. A few examples: Loveless and Dworin¹ found Pyribenzamine beneficial in 82% of 107 patients; Feinberg² noted relief in 82% of 254 cases; Gay and associates³ in 76% of 51 cases; Arbesman and colleagues⁴ in 84% of 106 cases. In a later study Arbesman⁵ rated Pyribenzamine one of "the most effective of all the drugs studied in allergic rhinitis. . . ." *Side effects:* It has been stated that "undesirable symptoms from the use of 50 to 100 mg. doses of Pyribenzamine were rarely of sufficient severity to interfere with its use."⁶ Drowsiness, nausea, epigastric distress, vertigo and other side effects—rarely severe—may occur in some patients.

CONTROLS PENICILLIN REACTIONS

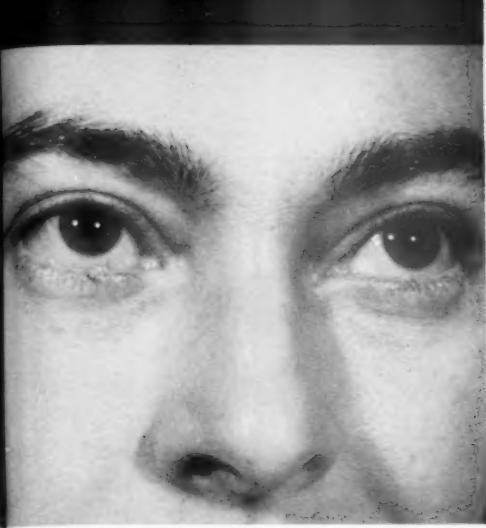
Pyribenzamine has been used successfully to control penicillin reactions—especially urticaria and itching. For example, Kesten⁷ found that oral Pyribenzamine relieved or suppressed post-penicillin urticaria in 16 of 18 cases; she termed it "a most useful agent in allergic symptoms which follow the administration of antitoxin or penicillin."

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AGE 75. Arteriosclerotic ulceration with erysipeloid reaction and marked inflammation; after administration of oral Priscoline, 25 mg. three times daily, for one week—increased thereafter to 50 mg. four times daily—there is steady improvement, healing in eight weeks. No other medication used.



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Photographs and accompanying clinical data by courtesy of R. I. Lowenberg, M.D., Consultant in Vascular Surgery, Connecticut State Hospital, Middletown, Connecticut.



AGE 68. Arteriosclerosis obliterans cellulitis; sluggish response to saline dressings and procaine penicillin 300,000 units daily; healing speeded by oral Priscoline, 25 mg. four times daily for one week, 25 mg. every three hours thereafter; healing within six weeks.

(Continued From Page 522)

recognized early; contraception will not be advised, and opportunity for pregnancy will not be hindered during the most fertile portion of the couples' lives. Also therapy, where indicated, can be given early.

Treatment of the Subfertile Man. Although many men are at first reluctant to come for fertility studies because they believe sexual potency is synonymous with fecundity, if they are found to be subfertile the largest majority of these patients become most cooperative. Their desire to father a child becomes urgent and they will go to almost any length to accomplish their goal. Sometimes the anxiety and tension which are built up may become so intense that the emotional factor is a possible barrier to pregnancy, according to some workers.

Numerous reports may be found of a few cases apparently successfully treated by various agents. To be significant the series must include an adequate number of treated cases and controls. At this time there is no one method or specific agent for the successful treatment of all cases of deficient spermatogenesis. Further, there are many causes for seminal deficiencies. The occurrence of pregnancy while a patient is under observation does not necessarily mean that it was due to the treatment employed. However, given a group of patients with barren marriages, the incidence of pregnancy apparently rises during the period of observation and after "treatment" is given. Which couple will have a pregnancy cannot be accurately prognosticated, especially when there are known deficiencies, but the likelihood of pregnancy can be estimated. However, we have all seen patients with extremely low sperm counts whose fertile wives eventually became pregnant and had a healthy baby, while there are others who have good seminal findings and are married to apparently fertile women, but pregnancy does not result.

MacLeod and Gold³ found in a series of 1,000 men whose wives were pregnant at the time of their study that 5 per cent had sperm counts under 20 million per c.c. while 16 per cent of men in a series of "1,000 cases

of infertile marriages" had counts below 20 million. A review of my cases of men in infertile marriages since 1946 shows that of eighty-six with sperm counts below 20 million per c.c. there are fourteen (16.2 per cent) whose wives eventually had one or more pregnancies to term. This suggests that given time and the opportunity for conception to occur, a not insignificant percentage of couples in which the male shows a low sperm count will have a pregnancy.

Therapy in the "infertile male" must be directed towards correction of any discoverable etiologic factors. Attempts are made to improve the patient's general health to an optimum. Thyroid is used frequently, although its specific indication is in hypothyroid states.

Animal experiments have demonstrated the importance of good nutrition and adequate vitamin intake for fertility. It seems reasonable that these are important factors in the human also. In some patients obesity will require management. In other cases fatigue may be a factor; some patients need more rest; others require exercise. Alcohol and tobacco are possible toxic agents. Tight fitting or excessively warm underclothing should be modified. Structural defects, especially obstructive conditions in the seminal tract, in some cases may be corrected by surgical procedures. Focal infections including prostatitis and vesiculitis may disturb spermatogenesis or adversely affect motility and sperm survival.

Numerous pharmaceutical agents have been used, some of which are still employed empirically in seminal deficiencies, but none result consistently in improved spermatogenesis. Pituitary and pituitary-like hormones have long been advocated, since it is known that the follicle-stimulating hormone (f.s.h.) of the pituitary is a stimulus to spermatogenesis. Unfortunately, clinical experience has not produced encouraging results. Pregnenolone in experimental animals has also given some promise, but in man has not proved effective. The use of testosterone has been reported in oligospermia based on the thesis that temporary suppression of spermatogenesis occurs, followed after a period of several months by

"rebound" to higher than pretreatment sperm counts. Although my experience is limited to a small series of patients, there has not been the hoped for improvement. The possible use of hyaluronidase to aid the sperm in penetration of the ovum was suggested, but clinically the results have not been encouraging. Vitamin E has been shown in experimental animals to affect fertility. In treatment of men this medication has not been proved of definite value.

Summary and Conclusions

Certain factors in evaluation of male fertility have been considered. The need for a complete examination of the man and the importance of careful palpation of scrotal contents has been brought out. Conditions which may eventually produce subfertile states should be adequately treated early.

It is suggested that before contraceptive

advice is given to childless couples that minimal fertility studies be done first.

Although treatment of seminal deficiencies is often discouraging, since there is no one specific medication, there are conditions which if searched for and corrected may favorably influence the disturbance. The factors of time and repeated opportunity for conception, plus use of available modes of treatment, will eventually result in success in a significant number of cases where pregnancies might not be expected to occur. Of eighty-six patients with sperm counts below 20 million per c.c., fourteen (16.2 per cent) of their wives eventually had one or more pregnancies.

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Radioactive Gold in Prostatic Cancer*

ROBERT O. BEADLES, M.D., and JAMES M. LEWIS, M.D.

Colorado Springs, Colorado

RADIOACTIVE gold was first used in the treatment of prostatic cancer in 1951 by Flocks and his associates at the University of Iowa. Since that time, a fairly extensive experience in the technic of its use, and the results obtained have been recorded by various authors. Radiotherapy, in its usual forms, has been employed in the treatment of this condition in the past, yet the results in general have left much to be desired. The purpose of any radiotherapeutic effort is to bring a sufficient concentration of ionizing radiation on the tumor tissue so that death of the malignant cells will be accomplished. Any living cell can be destroyed if a sufficient dose can be applied. Yet, with previous methods, it has usually been impossible to obtain a tumor dose of enough intensity to be effective without causing severe damage to the intervening and surrounding structures. Because of this limitation, radiotherapy in the treatment of pros-

tatic cancer has largely been relegated to palliative use, to diminish bleeding and help relieve pain from metastasis.

With radioactive gold available, we now have a material and a method of radiotherapy which offers several distinct advantages and properties not possessed by x-ray, radium, or radon therapy. Inasmuch as the gold is a colloid we have, in effect, trillions of minute point sources per dose producing 90-95 per cent Beta irradiation with the remainder being Gamma irradiation. The Beta rays exert almost all of their action within a range of four to six mm., making it possible to concentrate most of the ionizing rays in a limited field, thereby saving adjacent areas from needless irradiation. There is evidence, experimental at present, which suggests that the colloid is picked up in the adjacent lymph channels so that an irradiative effect is obtained in the surrounding lymph nodes. With x-ray, tumor doses of 2,000 R are hoped for. With the radioactive gold, 65,000 REP doses are

*From the Department of Urology and Department of Radiology, Colorado Springs Medical Center, Colorado Springs, Colorado.

readily obtainable, plus 5-7,000 Gamma REP's, which in itself is an effective dosage.

The technic involved in using this material requires definite teamwork with a well organized routine, largely because of the hazard to the surgeon, assistants, and radiologist from the ionizing irradiation. Different methods of handling the material have been worked out at different centers. Briefly, ours is as follows: The gold is transported to the operating room in a four-inch lead shielded pot, then, after the prostatic cancer is exposed and the amount of tumor tissue is estimated by the urologist, the radiologist draws the colloidal gold from the lead pot into a lead syringe using one milliecurie of radiogold for each gram of estimated tissue. Needles are then placed throughout the entire prostatic cancer about one cm. apart, usually six to nine needles are necessary. The radiologist then transfers the radiogold filled lead syringe to the urologist who injects the dose equally into the previously placed needles. All the material is not injected in one place, but rather an attempt is made to disperse it along the track of the needle. Because a majority of our patients have had definite obstructive symptoms, the obstruction is relieved prior to the injection, either by digital enucleation of the presenting tissue or by the use of the conization tip of the electro-surgical unit, the prostatic area is coned out to allow an adequate outlet. From the beginning of injection until the skin is closed, every effort is made to complete the procedure as rapidly as is possible, inasmuch as the surgeon and his assistants are exposed to the Gamma irradiation during this time.

All personnel in the operating room are required to wear ionization chambers so that their exposure can be calculated. After the procedure is completed, the instruments and linen are checked for radioactive contamination and any contaminated material is placed in a cardboard box for natural radioactive decay to occur before being handled. The subsequent care of the patient is surgically that of any suprapubic prostatectomy or suprapubic cystotomy with rapid rehabilitation of the patient. During the postoperative period the catheter drainage is monitored and disposed of by the

radiologist. Most of these patients are discharged from the hospital in six to eight days.

The patients chosen for this type of therapy are those who have a positive diagnosis of cancer of the prostate which is beyond the scope of radical surgery, and yet in whom no distant metastases can be demonstrated, and in whom it is felt that the malignant process is localized to the prostatic area. Flocks and his co-workers at the University of Iowa have had the most extensive experience with this treatment. Their first case was operated in 1951. Although not enough time has passed to know what the ultimate results will be, they feel that there is no question that at the present time tremendous destruction of the tumor, and in some cases apparently complete eradication, has occurred.

In a recent paper, Crigler, et al., have studied twenty-eight patients with a special emphasis on the histologic studies of the post-irradiated tissue. Trans-urethral biopsies were taken at thirty, sixty, and ninety days and one year after injection of the radioactive gold. Quoting from that paper, "In the sixty-day biopsy, all sections showed evidence of extensive necrosis and fibrosis.

In general, the cellular pattern was similar to that of the thirty-day specimens except that the neoplastic cells were far less numerous. The cells present showed extensive radiation damage. The ninety-day biopsy showed a marked change in neoplastic cellular volume, there being an almost entire replacement of the prostatic bed by stromal or fibrous tissue. Only occasional cancer cells were present. Even in these instances the stromal pattern was in the process of closing around the involved cancer cells. In the final one-year biopsy, few positive slides were obtained. These showed fibrous and stromal replacement of the previously malignant cell bed, with the picture of "burning out" of the neoplastic cellular pattern, leaving only vacuolated cell remnants of once active neoplastic cells." These and the reports of various other investigators of their follow-up studies show that this material is a most potent agent for the destruction of tumor tissue, and yet it can be used in prostatic cancer

with a minimum of harmful side effects to the patient.

In our hands, ten patients have received interstitial irradiation with Au 198 for the treatment of localized (as far as can be determined) prostatic cancer. While the number of patients involved is very small, the clinical results obtained have been encouraging. Our first patient was treated with Au 198 on February 1, 1952. This 75-year-old man was seen after he had had six months of estrogenic therapy with no significant improvement. He presented the problem of a large, nodular, fixed, hard prostate with overflow incontinence. Complete studies revealed no evidence of distant metastases. He was operated and found to have a rather large tumor, and because of the obstructive symptoms, part of the presenting gland was removed and thirty millicuries of radioactive gold were injected into the remaining cancer.

The postoperative and subsequent course has been most satisfying. After two months' time it was impossible by digital examination to find any suspicious areas, and now, twenty-one months later, he remains free of any evidence of cancer. Of the ten cases treated, seven were obstructed and required removal of the obstructing tissue. Three were injected only with gold. Eight patients had had previous attempts at estrogenic control, either with oral therapy, orchiectomy, or both. Five cases are living and show no clinical evidence of demonstrable cancer at present. One patient reveals evidence of inadequate therapy. Two patients have been treated too recently for any evaluation. Two patients are dead, and the deaths are worthy of explanation. The first died of severe burns, yet he had far advanced local cancer at time of operation and it was felt that it was impossible to attain adequate irradiation. At time of death, he had widespread metastases. The second death occurred in a patient who had had two trans-urethral resections and orchiectomy previously. This patient was seen in increasing uremia and suffered repeated massive hemorrhages. In an attempt at control, gold was used. However, the uremia was progressive and the patient expired ten days postoperatively.

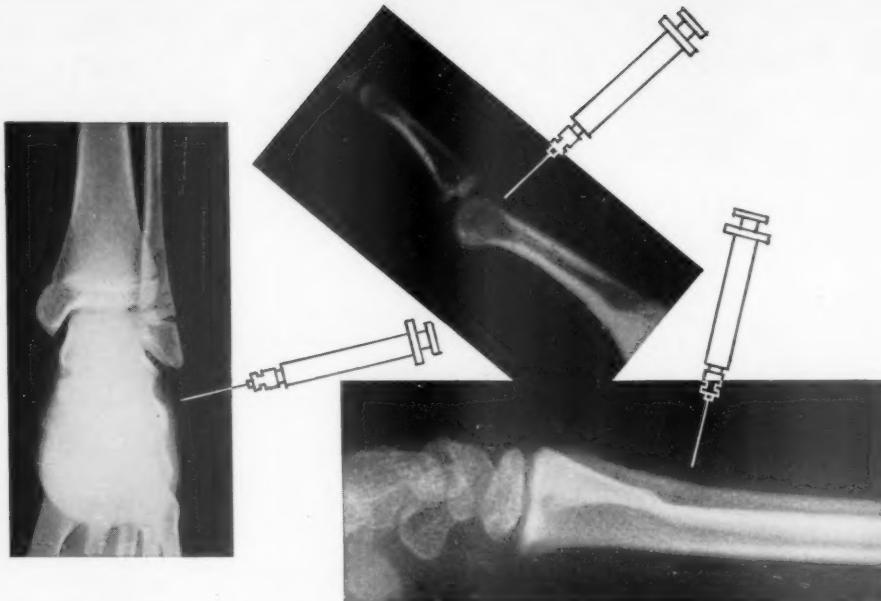
Of the patients with prostatic cancer who are seen by the average urologist, from 5 to 10 per cent have early lesions which are best treated by radical surgical extirpation. There is also a great group which shows definite metastasis, and as far as present knowledge and methods are concerned, these may be considered incurable and treatment directed toward palliation only. Between these therapeutic extremes is the largest numerical group of all, approximately 50 to 60 per cent, cases of prostatic cancer which are beyond the scope of radical prostatectomy, yet demonstrate no distant metastases. These patients have previously been treated palliatively with relief of obstruction and attempt at hormonal control. It is in this group that the use of radioactive isotopes offers a powerful agent for the destruction of tumor and a real hope of cure.

There are various technical problems which will require further refinement. Of these, probably the most important are: Perfection of a technic to insure an adequate and even distribution of the colloidal material so that all of the cancer tissue may be adequately irradiated. The development of methods whereby accurate correlation between the dosage and amount of tumor tissue treated can be determined. The development of further safeguards to lessen the irradiation hazard to the operative team. Concerning the latter category, various expedients have been used, these consisting largely of rotation of the operating personnel and improvement of operative technic. We are most interested in the work now being done in the development of a pure Beta ray emitting colloid, chromic phosphate, which would allow adequate irradiation to the injected tissue and yet minimum radiation hazards to the team.

If time bears out the promises of the present, the use of radioactive colloids may well become the standard treatment for this great group of prostatic tumors, because for the first time a real hope of cure, without severe damage to the patient, is offered.

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1. Flocks, R. H.: Treatment of Carcinoma of the Prostate. *Transactions Western Section of A.U.A.*, 1952, Vol. 19, Page 29-36.
2. Crigler, Cecil, et al.: The Use of Radioactive Gold in the Treatment of Prostatic Cancer. Paper presented at the South Central Urologic Society, September 21, 1953.



Use of Alidase® in Closed Wounds: Contusions, Sprains, Dislocations, Simple Fractures

In traumatic surgery¹ where "definitive treatment . . . is often delayed while the surgeon waits for nature to dispose of hematoma and oedema" Alidase is an efficient means^{1, 2} of accelerating dispersion of accumulated fluids.

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The point of maximal pain is infiltrated with 10 cc. of a 1 per cent procaine solution to which 500 viscosity units of Alidase have been added. With this simple technic, a high percentage of successful results has been obtained.

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1. MacAusland, W. R., Jr.; Gartland, J. J., and Hallock, H.: The Use of Hyaluronidase in Orthopaedic Surgery, *J. Bone & Joint Surg.* 35-A:604 (July) 1953.

2. Swenson, S. A., Jr.: Minor Surgical Aspects of Closed Wounds, *Am. J. Surg.* 87:384 (March) 1954.

The Washington Scene



A monthly news summary from the nation's capital by the Washington Office of the A.M.A.

At the request of the Defense Department, Congress is considering a bill to expand and make more uniform the medical care program for civilian dependents of military personnel. It could have significant impact on the practice of medicine and on medical economics.

The legislation developed out of the Defense Department's Moulton Commission report of a year ago. In the intervening months the department's legislative planners called in representatives of the American Medical Association and other professional groups for advice. But the bill finally presented to Congress is evidence that not all differences of opinion were compromised. While in many respects the measure is in line with the policy of A.M.A. on dependent care, at least one basic conflict remains:

The department's bill states that dependents should receive private medical care only when military facilities are unavailable or inadequate. The A.M.A.'s policy, adopted after long study of the problem, is that dependents should be cared for in military hospitals and by uniformed physicians only when civilian care is inadequate or unavailable.

There is almost complete agreement that the present patchwork dependent medical care program should be changed to make benefits uniform geographically and within the services, and to spell out the benefits in law. The issue is whether the military medical services should care for all qualified civilian dependents, or dependents should, like the rest of the population, get their medical care from civilian physicians and hospitals.

Under the bill, medical care furnished by or underwritten by the federal government would be limited to "diagnosis, acute medical and surgical conditions, contagious diseases, immunization, and maternity and infant care." Dental care would be allowed only in emergencies or as an adjunct to medical care. These restrictions would be waived overseas and at remote stations in the United States.

The definition of "dependents" would not extend beyond parents and parents-in-law, and these relatives would have to receive at least

half their support from the military member to qualify.

The Secretary of Defense would decide what charges, if any, to levy against dependents treated at military facilities. When treated privately, the dependents would pay the first \$10 cost of any illness, plus not more than 10 per cent of the total cost. The secretary could make use of voluntary health insurance for dependents if this system were found to be more economical.

The Senate Armed Services Committee was slow to take up the dependent care bill because of a heavy schedule of other hearings. Nor did it make fast progress in the House. There the introduction of the bill was delayed when Chairman Dewey Short (R., Mo.) called on Defense Department to furnish him with detailed information on what the new medical care program would cost.

By mid-May, when Congress had about concluded hearings on all major administration health bills, a new factor was introduced. Chairman Wolverton of the House Interstate and Foreign Commerce Committee called hearings on his own bill for federal guarantee of private loans to health facilities. This was not part of the original Eisenhower health program, but there were some indications that the administration might get behind it.

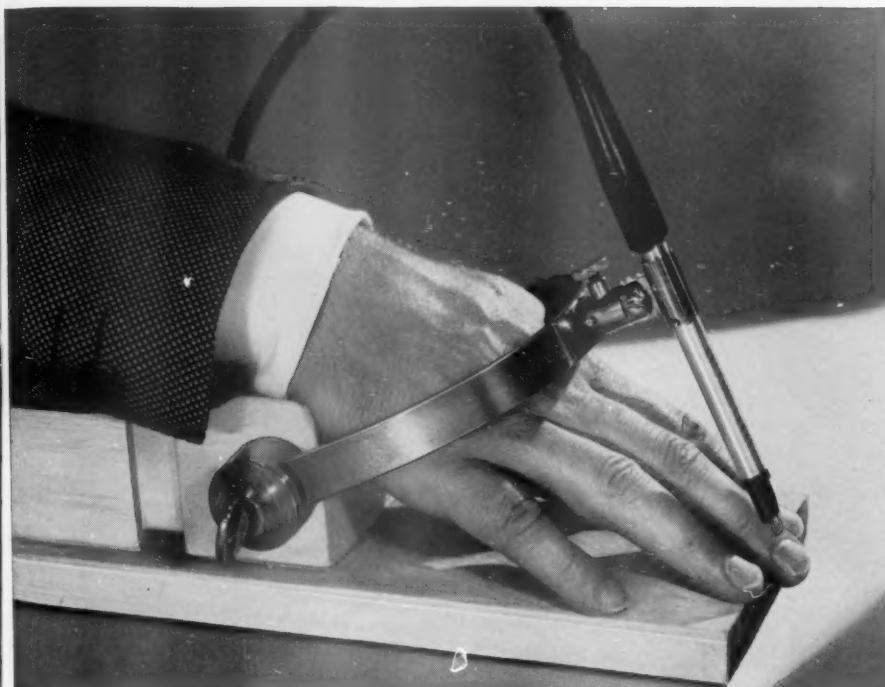
As originally drawn, the bill would virtually exclude all clinics and hospitals except those operated in conjunction with prepaid insurance plans. During the hearings, Mr. Wolverton indicated he would be willing to drop this restriction. If this was done, the law then would offer benefits to all—fee-for-service physicians and groups as well as "closed panels."

During this period, some sentiment developed to combine the loan guarantee bill with the reinsurance bill, which wasn't making much progress on its own. The result was a period of confusion and uncertainty, with no clear indication of what either the committee or the administration really wanted.

A few other medically-important bills were advancing on schedule. The House Ways and Means Committee gave every indication of reporting out a bill to require all employers (physicians included) to participate in the federal-state unemployment insurance program. As usual moving faster than the Senate, the House had passed a bill to give state health officers more control over federal grants for public health work. The House also was nearing a vote on extension of the social security program, with no suggestion that physicians and other self-employed groups who don't want coverage would be exempted. The House-approved Hill-Burton expansion bill was waiting action in the Senate.

Physiological test

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tars than any other cigarette, *old or new*. 2) Ordinary cotton, cellulose or crepe paper filters remove a small but ineffective amount of nicotine and tars.

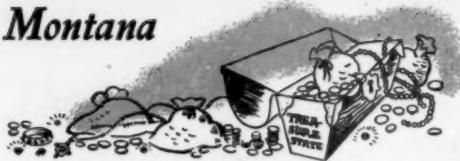
Thus KENT, with the first filter that really works, gives the one smoker out of every three who is susceptible to nicotine and tars the protection he needs . . . while offering the satisfaction he expects of fine tobacco.

For these reasons, smokers have made the new KENT the most popular new brand of cigarette to be introduced in the last 20 years.

If you have yet to try the new KENT with the exclusive Micronite Filter, may we suggest you do so soon?



Montana



PROCEEDINGS OF THE HOUSE OF DELEGATES* MONTANA MEDICAL ASSOCIATION SEVENTH INTERIM SESSION

March 6, 1954

The Seventh Interim Session of the House of Delegates of the Montana Medical Association was called to order by S. C. Pratt, M.D., President, at 9:15 a.m. in the ballroom of the Placer Hotel, Helena.

Following the roll call of delegates, the Secretary, T. R. Vye, M.D., announced that all delegates seated had presented proper credentials and a quorum was present.

Upon motion regularly seconded and carried, the following were seated as delegates from the component society indicated: Amos R. Little, Jr., M.D., Helena, Lewis & Clark Medical Society; J. J. Malee, M.D., Anaconda, Mount Powell Medical Society; R. W. Polk, M.D., Miles City, South-eastern Montana Medical Society; George G. Sale, M.D., Missoula, Western Montana Medical Society.

It was moved by J. R. Thompson, M.D., that the reading of the minutes of the 75th Annual Meeting, held in Billings, September 19, be dispensed with, inasmuch as these minutes were published in the December, 1953, issue of the Rocky Mountain Medical Journal. This motion was seconded and carried. It was moved by B. C. Farrand, M.D., that the minutes of the annual meeting be approved as published in the Rocky Mountain Medical Journal. This motion was seconded and carried.

R. F. Peterson, M.D., delegate to the American Medical Association, reported at length on the actions of the House of Delegates of the A.M.A. at its December meeting in St. Louis. This report was received and placed on file.

The report of the Secretary-Treasurer, T. R. Vye, M.D., was received and placed on file.

The report of the Executive Committee was read by Secretary Vye and placed on file.

Following the presentation of the report of the

*These proceedings have been summarized. All motions and resolutions acted upon by the House have been included in these minutes but the Committee reports have been omitted. The reports of all Committees, however, are on file in the Executive Office of the Association, 1236 N. 28th St., Billings, and a copy of any report will be furnished to any member upon request.

Necrology and History of Medicine Committee by Edward S. Murphy, M.D., Chairman, it was moved by George G. Sale, M.D., that the House of Delegates extend its condolences to Leonard W. Brewer, M.D., of Missoula, and his family upon the death of his son. This motion was seconded and carried unanimously.

Park W. Willis, Jr., M.D., Chairman, presented the report of the Public Relations Committee, which was received and placed on file.

It was moved by Thomas F. Walker, Jr., M.D., and seconded that a budget of \$200 be established for the activities of the Public Relations Committee during the current year. Motion carried.

It was moved by Park W. Willis, Jr., M.D., that the President be empowered to appoint a special committee of this association to study the proposals of the Iowa State Medical Society to revise the Principles of Ethics to permit rendering one statement for services when medical care is rendered by more than one physician. This motion was seconded and carried.

A supplemental report of the Program Committee was presented by the Vice Chairman, John A. Layne, M.D., and ordered placed on file.

John A. Layne, M.D., moved that the Program Committee be authorized to select the meeting place in each of the cities in which the meeting is held that in its opinion offers the most adequate facilities for the type of clinical program that is to be presented. This motion was seconded and carried. Doctor Layne moved that the Program Committee be given the authority to determine which of the voluntary health organizations shall be invited to sponsor scientific speakers at each of the clinical sessions. This motion was seconded and carried. It was moved by Doctor Layne that the recommendation of the Program Committee upon the specialties of medicine to be included in each scientific program be accepted. This motion was seconded and carried.

It was regularly moved and seconded that James P. Harnsberger, M.D., be seated as a delegate for the Northeastern Montana Medical Society. Motion carried. A. R. Kintner, M.D., moved that Raymond E. Smalley, M.D., and Ralph H. Biehn, M.D., be seated as delegates for the Yellowstone Valley Medical Society. This motion was seconded and carried.

S. A. Cooney, M.D., Chairman of a special committee to review the fee schedule of the Industrial Accident Board, discussed his negotiations with the Board and reported that it had authorized a number of increases in its schedule for medical services. This report was received and placed on file. It was then moved, seconded and carried that Doctor Cooney be highly commended for the results of his negotiations with the Industrial Accident Board.

Following the report of the special Committee on Medical Education by E. H. Lindstrom, M.D.,



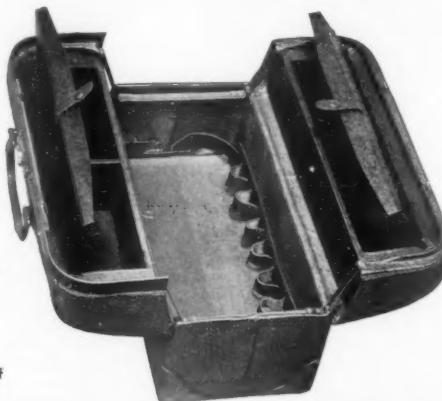
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Chairman, it was moved by George M. Donich, M.D., that the recommendations of the Committee on Medical Education, i.e., that a special committee of the American Medical Association and the American Osteopathic Association be selected to investigate the curricula of the osteopathic schools and that no action upon the Cline Report be taken by the House of Delegates of the A.M.A. until a further study of its proposals has been completed, be approved. This motion was seconded and carried after discussion. It was then moved by George G. Sale, M.D., that the delegate of this association to the American Medical Association be instructed to cast his vote in favor of that portion of the Cline Report which would encourage physicians to teach in schools of osteopathy so as to improve the undergraduate and postgraduate educations of osteopaths. This motion was seconded and, after a standing vote, was declared carried, 24 in favor and 18 opposed. Following further discussion of the various sections of the Cline Report, it was moved by Harold W. Gregg, M.D., and seconded that the previous action of the House encouraging physicians to teach in schools of osteopathy be rescinded and that the delegate of this association to the A.M.A. be instructed to vote against the adoption of the Cline Report. After a standing vote, this motion was declared carried, 24 in favor and 17 opposed.

The House recessed at 12:30 p.m.

The House of Delegates reconvened at 1:45 p.m. in the ballroom of the Placer Hotel, Helena.

The reports of the following standing and special committees of this association were received and placed on file after each was read by the chairman or committee member indicated:

Committee on Blood Banks—H. M. Blegen, M.D., Missoula.

Interprofessional Relations Committee—Park W. Willis, Jr., M.D., Hamilton.

Rheumatic Fever and Heart Committee—F. R. Schemm, M.D., Great Falls.

Cancer Committee—Harold W. Gregg, M.D., Butte.

Maternal and Child Welfare Committee—Earl L. Hall, M.D., Great Falls.

Rural Health Committee—B. C. Farrand, M.D., Jordan.

Emergency Medical Service Committee—John W. Schubert, M.D., Lewistown.

Auditing Committee—George M. Donich, M.D., Anaconda.

School Health Committee—T. R. Vye, M.D., Billings.

Hospital Relations Committee—R. F. Peterson, M.D., Butte.

Legislative Committee—Amos R. Little, Jr., M.D., Helena.

Legal Affairs and Malpractice Committee—Louis W. Allard, M.D., Billings.

Tuberculosis Committee—H. V. Gibson, M.D., Great Falls.

Program Committee—T. W. Saam, M.D., Butte.

R. O. Bjork, M.D., representative of this association on the Joint Committee on Health Problems in Education, presented the report of this group, which was accepted and ordered placed on file.

D. S. MacKenzie, Jr., M.D., Chairman, presented the report of the Economic Committee, which was received and placed on file. It was moved by Dr. MacKenzie that all agreements upon fees for medical services with county, state or national organizations, public or private, be based upon the Average Fee Schedule of this association. This motion was seconded and carried. Doctor MacKenzie moved that the recommendation of the Economic Committee that it be authorized to review semi-annually the Average Fee Schedule and submit its recommendations for adjustment of this schedule to the House of Delegates at each annual or interim session be approved. This motion was seconded and carried. It was then moved by Doctor MacKenzie that the recommendations of the Economic Committee requesting M. P. S. to discontinue the use of the term "Fee Schedule," that it rename that document a "Schedule of Payments to Professional Members" and that this House request M. P. S. to restrict distribution of its Schedule of Payments to Professional Members to those who are professional members and to organizations which are engaged in similar voluntary prepayment plans for medical care be approved. This motion was seconded and carried.

The report of the Mediation Committee was presented by the Chairman, F. S. Marks, M.D. This report was received and placed on file. It was moved by Doctor Marks that the recommendations contained in the report of the Mediation Committee to modify the statement of its purposes as follows be adopted:

1. That paragraph D be changed to read, "In pursuance of its function within the structure of the association, the committee shall have the power and authority to summon members of the association to appear before it, or to enter into correspondence with such members, either in connection with complaints involving the members or as witnesses in cases involving other members. In case any member shall fail to respond to such summons, or to such correspondence, the Mediation Committee shall cite the member before the Council for contempt proceedings."

2. That paragraph E be amended to read, "It shall be considered ethical for the committee, or a member of the committee, to inspect hospital records pertinent to a complaint."

3. That a new paragraph, Paragraph G, be added: "In the event that legal action is instituted by the complainant, either prior to or during investigation of a complaint by the Mediation Committee, jurisdiction of the entire matter shall be transferred to the Legal Affairs and Malpractice Committee of the state association."

This motion was seconded and carried. It was

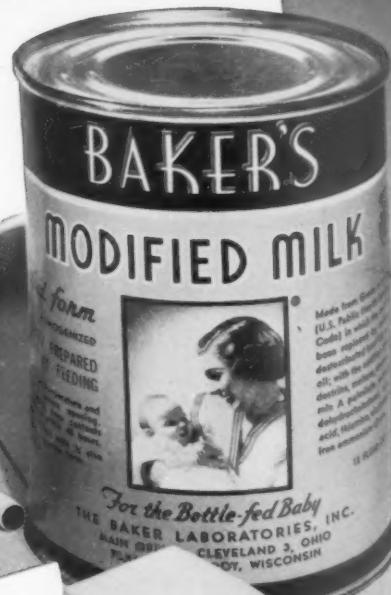
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then moved by Doctor Marks that the recommendations of the committee to revise its rules of operation as follows be adopted:

1. That paragraph A be amended to read, "The committee will receive complaints in writing from any lay person or from any physician member of this association."
2. That paragraph B be amended to read, "The committee will respect the confidential nature of any complaint. Every complainant will be invited to present fully his complaint by letter or by appearance before the committee, with the assurance that his identity and the nature of his complaint will be kept confidential to the fullest degree consistent with adequate investigation of the complaint. However, should any formal prosecution result, the committee will, of necessity, . . ."
3. That a new paragraph, Paragraph L, be added: "Decisions arrived at by any five members of the Mediation Committee shall be considered the expression of the entire committee."

This motion was seconded and carried.

The report of the Fracture and Orthopedic Committee was received and placed on file following its presentation by Louis W. Allard, M.D., a member of the committee. It was moved by Doctor Allard that the Division of Child Health Services of the Montana State Board of Health be requested to establish a registry of cases of handicapped children for the purpose of informing attending physicians of the availability of special services for the treatment of such children. This motion was seconded and carried.

Ralph H. Biehn, M.D., Chairman of the Arthritis and Rheumatism Committee, read the report of that committee which contained the following recommendations:

1. That it select a state lay chairman, a state secretary, and state treasurer and two other laymen who will serve with the state medical committee.
2. That each district medical chairman be requested to appoint the following: Two or more medical members of a district medical committee to serve with the chairman and an equal number of laymen to compose the lay committee. It is understood that the district medical committee will determine the medical programs and that the lay committee will cooperate with the physicians in carrying out such programs.
3. That as soon as both lay and district committees are completed we request the Executive Director of the Rocky Mountain Chapter to meet with the district medical and lay committees to assist in developing programs for each area.
4. That the state and district medical committees arrange for five or six group medical meetings to which the Rocky Mountain Chapter will be invited to send visiting teams of specialists in arthritis to conduct a scientific program for the physicians, and that all physicians in the respective areas be urged to attend.
5. That the state and district medical committees request the Rocky Mountain Chapter to continue sending the monthly medical bulletins to all physicians in the state and that physicians be requested to send to the state medical chairman the names of doctors and laymen who would like to be placed on the mailing list for the bi-monthly news letter, "The Rocky Mountain Arthritic."



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6. That the state and district committees consider for the respective areas an educational program through the press, radio and TV. All material to be used in such manner to receive first the approval of the central medical committee.

7. That we pledge our cooperation to the Wyoming Medical Society through the Montana Medical Association President, S. C. Pratt, M.D., in setting up a medical program for the proper use of the funds in the Goettsche Estate which must be sent to Thermopolis, Wyoming, and which we understand now amounts to \$800,000 or more. (Dr. Pratt has been appointed to a committee from the Rocky Mountain Chapter to submit a program to the committee of the Wyoming State Medical Society.

8. The Montana Division will in time be requested to appoint members to the various standing committees of the Rocky Mountain Chapter. We therefore recommend that at our next meeting we be prepared to nominate members to the following committees: Research, Public Relations, Policy, Editorial, Membership, Medical and Scientific, and Finance.

9. That we forward a copy of this report to Mr. Ralph E. Nollner, Executive Director of the Rocky Mountain Chapter of the Arthritis and Rheumatism Foundation, and that the Secretary be instructed to write Mr. Nollner to express our appreciation for his exceptional help in furthering our state program. Also a personal note of thanks to Mr. L. R. Hegland for his fine assistance and guidance along parliamentary lines.

It was moved by Park W. Willis, Jr., M.D., that the report of the Arthritis and Rheumatism Committee be approved and the recommendations contained therein be adopted. This motion was seconded and carried.

The report of the special Committee on Veterans Affairs was read by Park W. Willis, Jr., M.D., in the absence of the Chairman, C. H. Fredrickson, M.D. This report was received and placed on file, after which it was moved by A. L. Vadheim, Jr., M.D., that this House of Delegates go on record as supporting the position of the American Medical Association on medical and hospital care for veterans as outlined in the report of the Committee on Veterans Affairs. This motion was seconded and carried.

The report of W. G. Tanglin, M.D., the representative of this association on the Montana Health Planning Council, was received and placed on file. It was then moved by Park W. Willis, Jr., M.D., that this House of Delegates express its sincere appreciation to C. H. Fredrickson, M.D., for the many services rendered the medical profession during his tenure of office as President of the Montana Health Planning Council. This motion was seconded and carried.

Chester W. Lawson, M.D., the representative of

this association to the American Medical Education Foundation, submitted a report upon the activities of the Foundation, which was received and placed on file. It was moved by John A. Layne, M.D., that this House of Delegates commend the Woman's Auxiliary to the Montana Medical Association for its diligent efforts in securing contributions for the Foundation. This motion was seconded and carried.

One of the representatives of this association on the Advisory Committee on Narcotic and Alcohol Education, T. W. Cooney, M.D., reported upon the activities of this advisory committee and suggested approval of the following recommendations adopted by that advisory committee:

1. That the 34th Legislative Assembly authorize some agency to plan, organize and direct a coordinated and continuing program of treatment for alcoholics in Montana, and provide funds necessary for the operation of such a program.

2. That there be established and maintained a specialized hospital for alcoholics, which shall not be identified by name with the Montana State Hospital.

3. That general hospitals in several key centers be encouraged to provide services to supplement the work of the specialized hospital for alcoholics.

4. That selection of patients, treatment, counseling and follow-up be planned as treatment of an illness, not as punishment for an error.

5. That plans be made to encourage better understanding of the problems of alcoholism, by hospital groups and by medical groups.

6. That this Advisory Committee undertake an immediate intensive campaign of public information about the nature of alcoholism, the need for a state sponsored program of treatment, and the role of the general public in the complete program.

7. That this committee develop a means of coordination of, and exchange of, information at the state level on the care and rehabilitation of the alcoholic.

8. That the establishment of more groups of Alcoholics Anonymous in this state be encouraged.

After this report was accepted and placed on file, it was moved by Park W. Willis, Jr., M.D., that these recommendations of the Advisory Committee be endorsed by this association. This motion was seconded and carried.

For the information of the delegates, George M. Donich, M.D., President of Montana Physicians' Service, reported upon the progress of M.P.S. and its plans for the immediate future.

T. R. Vye, M.D., Secretary, reported that, upon the recommendation of the Executive Committee, certain revisions in the By-Laws of the association were to be presented for adoption by the



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1. Malleson, J.: Lancet 2:158 (July 25) 1953. 2. Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc. 1953, p. 23.

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House. The component medical societies of the association were notified in writing of these proposed revisions two months prior to this session, as required by the By-Laws. The following amendments to the By-Laws were presented:

Amend Chapter II, Section 2, by adding the word "active" before the word "members" in the first sentence.

It was moved by George M. Donich, M.D., that this amendment be adopted. This motion was seconded and carried.

Amend Chapter VI, Section 4, Paragraph A, by adding in the first sentence after the words "Secretary-Treasurer" the words "Vice President and Assistant Secretary-Treasurer."

It was moved by Charles B. Craft, M.D., that this amendment be adopted. This motion was seconded and carried.

Amend Chapter VI, Section 4, Paragraph K, by adding the words "or from any physician" after the word "person" in the first sentence.

It was moved by Joseph P. Fraser, M.D., that this amendment be adopted. This motion was seconded and carried.

Amend Chapter VI, Section 4, Paragraph U, by deleting the sentence "In addition, it shall perform the duties of the Committee on Blood Banks and shall cooperate with the similar committee of the American Medical Association."

A. L. Vadheim, Jr., M.D., moved that this amendment be adopted. Motion was seconded and carried.

Amend Chapter VI, Section 1, by adding the following under the scientific and educational committees: "V. The Committee on Blood."

Wyman J. Roberts, M.D., moved that this

amendment be adopted. This motion was seconded and carried.

Amend Chapter VI, Section 4, by adding the following paragraph: "V. Committee on Blood. This committee shall promote the establishment of facilities to make blood available in communities of Montana and shall act as an advisory group to assist the communities to meet their needs for blood. It shall promulgate information for the proper operation of blood banks and for the standardization of technics for obtaining blood. It shall cooperate with the Committee on Blood of the American Medical Association and the Montana Regional Blood Center of the American Red Cross."

It was moved by H. M. Blegen, M.D., that the last sentence of this proposed revision of the By-Laws be amended to read:

"It shall cooperate with the Committee on Blood of the American Medical Association and maintain a liaison with the Montana Regional Blood Center of the American Red Cross and the American Association of Blood Banks."

This motion was seconded and carried.

It was then moved by John W. Schubert, M.D., that the proposal as amended be adopted. This motion was seconded and carried.

President Pratt requested J. C. Shields, M.D., Chairman of the Resolutions Committee, to report. Doctor Shields read resolutions of appreciation to the Lewis and Clark Medical Society, the Program Committee, the Placer Hotel, the City of Helena, the Helena Independent Record, and the Helena radio stations. It was moved by F. D. Hurd, M.D., and seconded that these resolutions be adopted. Motion carried unanimously.

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Department of Clinical Research

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Doctor Shields read the following resolution on highway safety:

Resolution

WHEREAS, The deaths and injuries in automobile accidents have risen in Montana during the past year to an appalling level; and

WHEREAS, There seems to be an apathy of the public as to their interest and responsibility in the prevention of these deaths and injuries; and

WHEREAS, Even when irrefutable medical evidence of intoxication is presented to the courts and jury, the decision of the courts and juries have completely ignored the results of scientific tests for the determination of intoxication with alcoholic beverages; and

WHEREAS, The Montana State Highway patrolmen and other law enforcement officers have been severely handicapped in fully protecting drivers on the highways and in the cities against the menace of the drunken driver; and

WHEREAS, The Montana Medical Association fully realizes the fact that there are many drivers on the highway incompetent to properly handle the modern automobile; and

WHEREAS, The Montana Medical Association realizes the problem and stands ready and willing at any time to aid the law enforcement officers, those engaged in prevention of accidents and other organizations working to decrease accidents; therefore be it

RESOLVED, That the President of the Montana Medical Association be authorized and instructed to appoint a committee of three physicians to meet with the Montana State Highway Patrol and other groups interested in decreasing deaths and injuries on the highways of Montana and that this special committee bring to the attention of the citizens of Montana their responsibilities as individual drivers and as jurors who sit in judgement of those accused of infractions of the law.

It was moved by J. R. Thompson, M.D., that this resolution be adopted. This motion was seconded and carried unanimously.

The following resolution about the Wolverton Bill was read by Doctor Shields:

Resolution

WHEREAS, The Wolverton Bill on reinsurance of medical and hospital voluntary insurance plans will result in the following things: (1) It is an appeal for votes from those that are not informed; (2) it collects federal taxes; (3) it places the Federal government in complete control of all such service plans; and (4) it excludes all indemnity clubs, societies and corporations; and

WHEREAS, The specifications of the bill are inimical to the best interests of the public and would be an entering wedge under another name for socialization of medicine; and

WHEREAS, Control of these plans would inevitably end in the hands of the Federal government; therefore be it

RESOLVED, That the House of Delegates of the Montana Medical Association, assembled in Interim Session, express its unalterable opposition to this bill; and be it

RESOLVED further, That the medically indigent be cared for by local, county and state governmental agencies; and be it

RESOLVED further, That a copy of this resolution be sent to the Congressional representatives of Montana and to the American Medical Association.

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It was moved by Park W. Willis, Jr., M.D., and seconded that this resolution be adopted. Motion carried.

Doctor Shields read the following resolution on social security:

WHEREAS, Representative Carl T. Curtis of Nebraska is to be highly complimented for his hearings and analysis of our social security system; and

WHEREAS, The system is not insurance and issues no contract; and

WHEREAS, Social security is sparingly social, the maximum payment being \$85.00 a month covering only 53,000 of the population, while 500,000 receive the minimum payment of \$25.00 a month, with an average payment of approximately \$45.00 a month; and

WHEREAS, An individual who earns \$75.00 or more per month is no longer entitled to his social security benefits; and

WHEREAS, As of January 1, 1953, 6,400,000 persons who had earned some credits and paid some taxes had died without receiving even a death benefit under the 1935 law; and

WHEREAS, These unfortunate people had paid \$361,800,000 in employee taxes and their employers had paid a like sum, and the self-employed had paid \$1,400,000 in taxes; and

WHEREAS, This amounts to three-quarters of a billion dollars in social security taxes for which there have been no benefits issued; and

WHEREAS, The social security law is amended practically every two years, depriving certain individuals who have paid social security taxes of their benefits; and

WHEREAS, All candidates for the Presidency and for Congress use the social security law to promise greater benefits in order to corral votes; and

WHEREAS, The social security law is another form of income tax; and

WHEREAS, The Curtis hearings and analysis reveal our social security law to be a snare and a delusion; and

WHEREAS, House Bill 6863 would force 10,000,000 self-employed professional persons, merchants, farmers, ranchers, etc., under social security, which they do not desire; therefore be it

RESOLVED, That the House of Delegates of the Montana Medical Association urge Congress to repeal the social security law of 1935 and that the Federal government pay from its general fund a certain amount to each individual on proof of age and citizenship; and be it

RESOLVED further, That the House of Delegates of the Montana Medical Association assembled in Interim Session express its unalterable opposition to this bill; and be it

RESOLVED further, That a copy of this resolution be sent to the Congressional representatives of Montana and to the American Medical Association.

It was moved by F. D. Hurd, M.D., that this resolution be adopted. Motion seconded and carried.

President Pratt read a letter from M. A. Shillington, M.D., Minneapolis, Minnesota, a former president of this association, expressing his appreciation to the House of Delegates for electing him to honorary membership at its last session.

A. R. Kintner, M.D., discussed the medical licensure law and the interpretation of this law by the Board of Medical Examiners. He suggested that revisions be considered so that physicians entering practice in Montana could do so legally without a lengthy waiting period to obtain a license to practice.

Following some discussion of the suggestions of Doctor Kintner, it was moved by John A. Layne, M.D., that the medical licensure questions presented by Doctor Kintner, that is, (1) the granting of temporary licenses to practice medicine, (2) meetings of the Board of Medical Examiners at more frequent intervals, and (3) an overall study of the licensure laws of Montana be referred to the appropriate committee of this association for a study and that the committee be asked to submit its report and recommendations to this body at its next meeting. This motion was seconded and carried.

There being no further business, the meeting of the House of Delegates adjourned sine die at 4:50 p.m.

The following delegates, alternates and members of this association attended the sessions of the House of Delegates:

Cascade County Medical Society: H. V. Gibson, Great Falls; Earl L. Hall, Great Falls; F. D. Hurd, Great Falls; John A. Layne, Great Falls; F. M. Petkevich, Great Falls; Wyman J. Roberts, Great Falls; Thomas F. Walker, Jr., Great Falls; George W.

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They have shown that wine in judicious quantities can stimulate the lax and achlorhydric stomach of the elderly, assist in providing a more adequate fluid intake, and improve elimination by enhancing the important gastrocolic reflex.

As a gentle sedative—sometimes called the safest of all sedatives for old age—wine can help allay restlessness and irritability, easing the fears and anxieties of the elderly. The euphoria—the “glowing sense of well-being”—produced by a glass of Port, Sherry or table wine, may aid significantly in overcoming the all-pervading sense of uselessness which too often mars the last decades of life.

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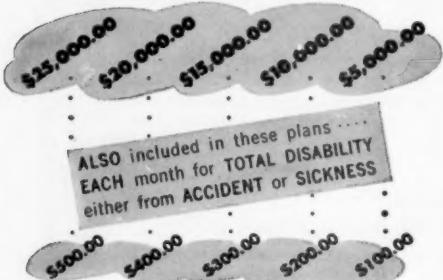
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Setzer, Malta; Carl G. Nelson, Great Falls; R. J. McGregor, Great Falls; A. A. McAuley, Choteau.

Fergus County Medical Society: Joseph P. Fraser, Lewistown; John W. Schubert, Lewistown; P. J. Gans, Lewistown.

Flathead County Medical Society: T. B. Moore, Kalispell; Alfred Wallner, Kalispell; E. P. Higgins, Kalispell; W. G. Tanglin, Polson.

Gallatin County Medical Society: Charles B. Craft, Bozeman; A. L. Vadheim, Jr., Bozeman; F. J. Pickett, Bozeman; D. D. Parke, Bozeman.

Hill County Medical Society: Robert Leeds, Chinook; D. S. MacKenzie, Jr., Havre; Chester W. Lawson, Havre.

Lewis and Clark Medical Society: Amos R. Little, Jr., Helena; T. W. Cooney, Helena; P. R. Ensign, Helena; James M. Flinn, Helena; E. H. Lindstrom, Helena.

Mount Powell Medical Society: J. J. Malee, Anaconda; V. E. Quiltmeyer, Deer Lodge; George M. Donich, Anaconda.

Northcentral Montana Medical Society: P. S. Cannon, Conrad; G. D. Waller, Cut Bank.

Northeastern Montana Medical Society: James P. Harnsberger, Poplar.

Park-Sweetgrass Medical Society: A. M. Lueck, Livingston.

Silver Bow County Medical Society: M. A. Gold, Butte; Harold W. Gregg, Butte; C. S. Meeker, Butte; M. E. Tuchscherer, Butte; T. W. Saam, Butte; J. C. Shields, Butte; R. F. Peterson, Butte.

Southeastern Montana Medical Society: B. C. Far-
rand, Jordan; J. R. Thompson, Miles City; R. W. Polk, Miles City; J. S. Pennebaker, Sidney; S. C. Pratt, Miles City.

Western Montana Medical Society: George G. Sale, Missoula; Park W. Willis, Jr., Hamilton; M. P. Wright, Missoula; A. R. Kintner, Missoula; W. F. Morrison, Missoula; H. M. Blegen, Missoula; Edward S. Murphy, Missoula.

Yellowstone Valley Medical Society: Louis W. Al-
lard, Billings; W. A. Armstrong, Billings; F. S. Marks, Billings; J. D. Morrison, Billings; Raymond E. Smalley, Billings; Ralph H. Biehn, Billings; T. R. Vye, Billings.

Because of the high degree of resistance which many strains of infecting organisms now exhibit to the antibacterial effects of streptomycin and because sensitive strains of infecting micro-organisms often become very quickly resistant to this antibiotic, the therapeutic use of streptomycin should be limited to the treatment of tuberculosis.—Perrin H. Long, M.D., N.Y.S. J. Med., Oct. 1, 1953.

The contrast in tuberculosis mortality rates of the Japanese in Hawaii as compared with the rates in Japan is of interest. In Hawaii, the rate for the five-year period, 1918 through 1922, was 132 per 100,000 as compared with 12 in 1952. In Japan, on the contrary, the rate for 1918 through 1922 was 233 and, in 1951, the last available figure was 111. Similar differences exist in other races such as the Filipinos, Chinese, and Koreans, all having much lower rates in Hawaii than those reported in their respective countries of origin. In all probability, higher living standards and better nutrition are the most important factors to account for these differences.—Hastings H. Walker, M.D., Am. Rev. Tuberc., December, 1953.

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Medical Forums In Salt Lake

Effectiveness of a public relations program designed to bring the medical profession into closer relationship with the public was proven recently in Salt Lake City by a series of twelve medical forum meetings sponsored jointly by the Utah State Medical Association and the Salt Lake Tribune.

Presented under the general title, "Your Doctor and Your Health," the project drew an estimated 13,000 persons to twelve medical forum sessions which featured some seventy-five Utah physicians and surgeons as panel members.

The weekly programs attracted capacity audiences to one of Salt Lake City's largest public school auditoriums.

Coordinator of the series was William C. Patrick, Medical Editor of the Tribune. Representing the Medical Association in coordinating the programs were Dr. Frank K. Bartlett, President

of the Utah State Medical Association; Dr. James Z. Davis, Chairman of the Public Relations Com-



Dr. Frank K. Bartlett, President, Utah State Medical Association, displaying the poster used to illustrate effectiveness of "Your Doctor and Your Health" medical forum series.



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mittee; and Harold Bowman, Executive Secretary of the Association.

Twelve specific topics were chosen for discussion in the twelve medical forum sessions for the "Your Doctor and Your Health" series, and for each session questions were invited from the public.

Each program included a panel of six physicians and surgeons chosen by the Medical Association's committee. Ten minutes were devoted to the moderator's introductory remarks on the "Your Doctor and Your Health" subject, and fifty minutes were devoted to panel discussion of questions posed by the public.

No questions were permitted from the floor. For one week prior to each session, the public was invited to telephone or mail their questions to Mr. Patrick at the Tribune. For mailing convenience, each night's printed program contained a questionnaire blank regarding the topic for the subsequent forum session.

Panel members met for a practice session three days prior to each program. At that time, questions received were assigned to various panel members. Questions received in the final three days were reviewed and assigned among panel members, who met at the auditorium for final briefing one hour before each session.

The series proved that health is good news to the public and excellent good will promotion for the medical profession, especially when topics emphasize personal health—with accent on "personal."

Nine of the twelve programs drew audiences which either filled the 1,200-seat auditorium or overtaxed its seating capacity. The remaining three topics drew large, although measurable lighter, audiences. These topics—one at the beginning and two at the midway point in the series—were concerned more with general health threats rather than specific ailments which may affect any person.

During the twelve-program series, a total of 550 specific questions submitted by the public were answered by the physician-surgeon panels.

More than 8,000 pieces of American Medical Association informative literature were distributed, as well as a large number of pamphlets issued by the American Heart Association and similar organizations.

A total of 27,000 pieces of literature printed by The Tribune, including nightly printed programs and questionnaire forms, were distributed. In addition, for a special session on the topic, "Overweight and Underweight," The Tribune printed a "Calorie Counter" with approval of the Medical Association panel on this subject. More than 5,000 of these were distributed to those attending the program, persons calling at the offices of The Tribune and the Medical Association, and persons writing in to request them.

Subjects discussed in the twelve-forum series included poliomyelitis, stomach ulcers, mental and emotional disorders, rheumatic fever, heart diseases, high blood pressure, headaches; arthritis and other rheumatic disorders; uses and abuses of drugs, and cancer.

UTAH AUXILIARY ELECTS

The annual meeting of the delegates and board members of the Woman's Auxiliary to the Utah State Medical Association was held at Salt Lake City on May 5 with the President, Mrs. A. M. Okelberry, presiding.

The annual reports of officers, County Presidents and the State President were given, showing participation of Auxiliary members in civil defense, legislation, mental health, safety programs and nurse recruitment.

The group extended a vote of appreciation to Mrs. Okelberry for her loyal service.

The following officers were elected for 1954-55: President, Mrs. C. O'Neil Rich; President-Elect, Mrs. Elmo Eddington; First Vice President, Mrs. E. D. Zeaman; Second Vice President, Mrs. R. N. Malouf; Recording Secretary, Mrs. Joseph H. Allen; Corresponding Secretary, Mrs. James F. Orme; Treasurer, Mrs. R. W. Sonntag; Auditor, Mrs. R. H. Wakefield; Historian, Mrs. Thomas Fenny.

Following the meeting an installation luncheon was held. Mrs. O. A. Ogilvie, a past State President, conducted the installation ceremonies, and Mrs. Okelberry presented Mrs. Rich with the President's pin.

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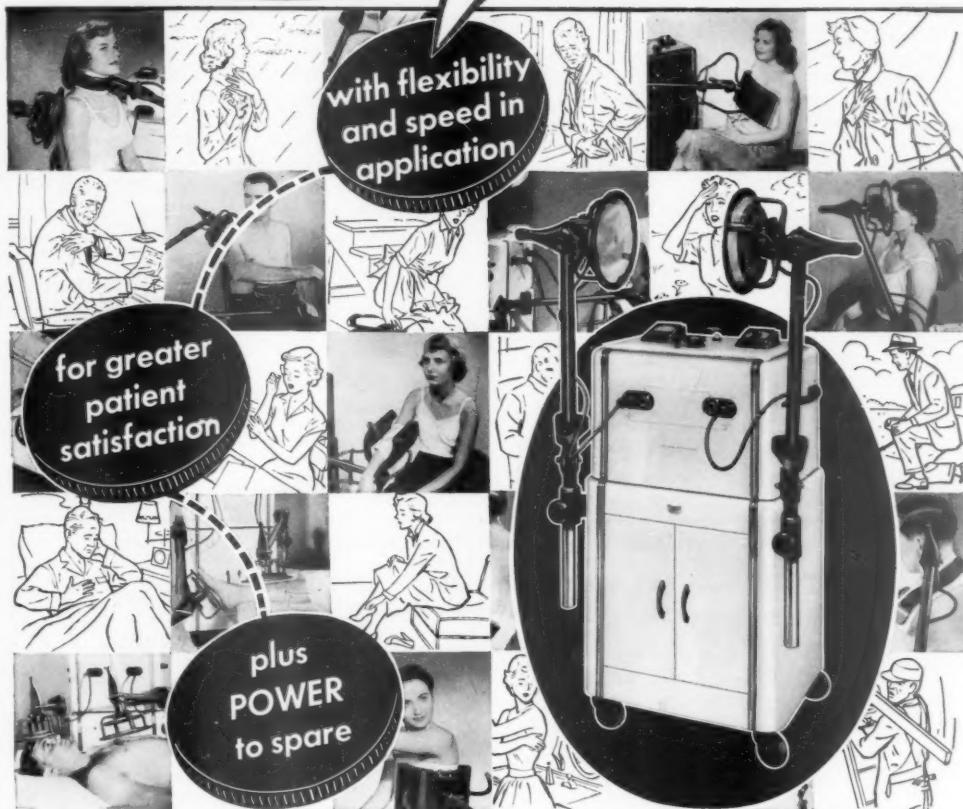
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Annual Clinics for Interns and Residents

The fifth annual Colorado Intern and Resident Clinics will be held on June 10 and 11, 1954, for the benefit of the intern and resident physicians in this area. These postgraduate conferences will be held at the University of Colorado Medical Center and have been organized and prepared entirely by the Intern and Resident staff through their own program committee.

During this two-day conference the physicians in training present the results of their own clinical studies and laboratory research. Each year an outstanding guest professor is invited to participate. Dr. William Dock, Professor of Medicine at the State University of New York, will be the guest clinician. He will also give the fifth annual intern and resident lecture in the Denison Memorial Auditorium, University of Colorado Medical Center, Thursday, June 10, 1954.

Two awards to be known as the George B. Kent Intern Award and the George B. Kent Resi-

dent Award will be presented annually as prizes for the best papers submitted by members of the intern and resident house staffs of Colorado Hospitals.

Component Society WELD COUNTY

A proposed Greeley ordinance which would require compulsory vaccination of dogs against rabies was endorsed by the Weld County Medical Society at its regular monthly meeting on May 3.

PLANS DIRECTORY OF PROFESSIONAL MOVIES

A comprehensive classified professional reference on 16mm professional films and authors designed to serve members of the medical and dental professions is planned by a Kansas concern. The forthcoming "Directory of Professional Motion Picture Films and Authors" is expected to be of service to medical societies, university faculty, hospital administrators and others. Film authors are invited to request a film questionnaire from Professional Publications, Compilation Department, 2010 Kentucky Street, Lawrence, Kansas.

In tuberculosis it is more important to have an agent or combination of agents possessing a long-sustained, suppressive effect on the tubercle bacillus than it is to have a "bombshell" effect which is quickly dissipated.—Eli H. Rubin, M.D., N.Y.S. J. of Med., June 15, 1953.

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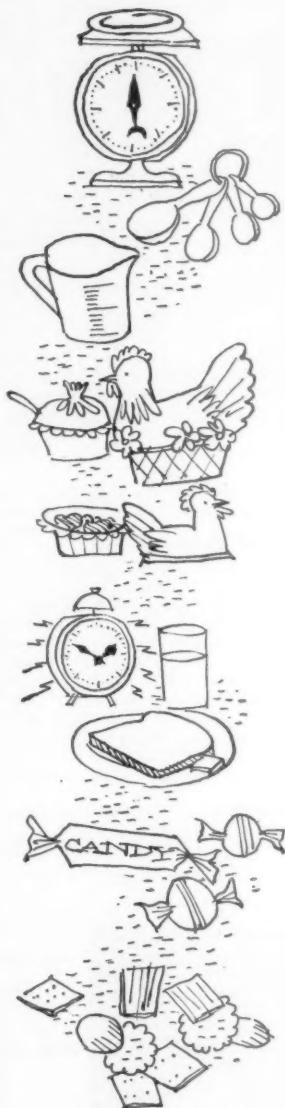
- EDGAR BURNS, M.D., New Orleans, La.
Prof. and Chairman of Dept. of Urology, Tulane Univ. School of Medicine.
- FREDERICK B. CAMPBELL, M.D., Kansas City
Diplomatic American Board of Proctology; Past President American Proctological Society.
- RAMON CASTROVIEJO, M.D., New York City
Director of the Corneal Surgery Clinic of the New York Eye and Ear Infirmary; Clin. Prof. of Ophth. of New York Univ. Postgraduate School of Medicine.
- JOHN J. CONLEY, M.D., New York City
Chief of the Head and Neck Dept., Pack Medical Group; Clin. Prof. of Otolaryngology, New York University.
- MATTHEW S. ERSNER, M.D., Philadelphia, Pa.
Prof. and Head of the Dept. of Otorhinolaryngology and Rhinoplasty, Temple Univ. School of Medicine.
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- FRANKLIN M. HANGER, M.D., New York City
Prof. of Medicine, Columbia Univ. College of Phys. and Surg.; Attending Physician, Presbyterian Hospital.
- L. E. HARRIS, M. D., Rochester
Consultant, Section of Pediatrics, Mayo Clinic; Instructor in Pediatrics, Mayo Foundation, Graduate School.
- WILLIAM K. KELLER, M.D., Louisville
Prof. of Psychiatry, Univ. of Louisville School of Medicine.
- CLARENCE S. LIVINGOOD, M.D., Detroit
Physician-in-charge, division of dermatology, Henry Ford Hospital, Detroit.
- A. E. MAUMENE, M.D., San Francisco
Prof. of Surgery of Ophth., Stanford University School of Medicine.
- GORDON MCNEER, M.D., New York City
Assoc. Attending Surgeon, Gastric and Mixed Tumor Services, Memorial Hospital, N. Y. C.; Consultant, Surgery (Gastro), Roosevelt Hospital, New York City.
- LESTER M. MORRISON, M.D., Los Angeles
Senior Attending Physician and Director Atherosclerosis Research Unit, Los Angeles County General Hospital; Lecturer in Medicine, Medical School, College of Medical Evangelists.
- MYRON PRINZMETAL, M.D., Los Angeles
Attending Physician, Cedars of Lebanon Hospital; Assoc. Clinical Prof. of Medicine, Univ. of Calif.
- DUNCAN E. REID, M.D., Boston
Prof. of Obstetrics, Harvard Medical School; Obstetric-in-chief, Boston Lying-in Hospital.
- Danely P. Slaughter, M.D., Chicago
Assoc. Prof. Surgery and Director Tumor Clinic, Univ. of Illinois Medical School.
- DONALD H. STUBBS, M.D., Alexandria, Virginia
Clinical Prof. of Anesthesia, George Washington Univ. School of Medicine, Washington, D. C.
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Your patient may feel an outsider both at home and away from home when diabetes upsets his eating habits. Of course, a measured diet is vital. The trick is to fit that diet as closely as possible to the patient's personal preferences and way of life. Here are some diet "do's" to help in planning the menus.

At home—

Try to adapt favorite recipes to the diabetic diet. Then select vegetables, beverage, and fruit or dessert to complete the diet prescription for the meal.

Suggest that measured portions be served in dishes that fit the serving. A small portion on a large plate is not a happy prospect.

Where possible, let your patient use a food exchange list. He'll delight in the variations it provides.

Away from home—

Explain that insulin demands food with the urgency and regularity of an alarm clock. If a dinner party will be late, suggest a light snack at the usual mealtime with a corresponding caloric reduction in the delayed meal.

Allow extra carbohydrate for extra activity. And have your patient carry hard candies as a precaution against insulin reaction.

If possible, plan low-calorie wafers in the diet for times when others nibble canapés or chocolates.

A diet that fits in smoothly with your patient's family and social life means you'll have his fullest co-operation, and he'll lead a happier life.

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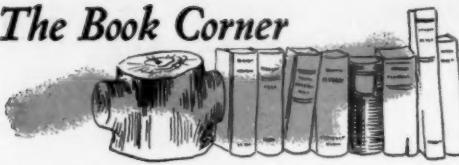
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The Book Corner



New Books Received

New books received are acknowledged in this section. From these, selections will be made for reviews in the interests of the *Journal*. Books here listed will be available for lending from the Denver Medical Library soon after publication.

Compulsory Medical Care and the Welfare State: By Melchior Paly. An analysis based on a special study of governmentalized medical care systems on the continent of Europe and in England. Published by National Institute of Professional Services, Chicago. Price: \$2.00.

Children for the Childless: Edited by Morris Fishbein, M.D. This book is a concise explanation of the medical, scientific, and legal facts of fertility, sterility, heredity, and adoption. Used in conjunction with visits to the family physician, it is a handbook for the single and married and a source of hope for the childless. Price: \$2.95.

Song of Life With Variations: By H. Ameroy Hartwell, M.D. Here in this volume, are the collected works of a busy physician who knows people and likes to help them and, in line with his profession, is mainly concerned with the most important problem confronting all of us all of the time, our bodily and mental health. Price: \$5.00.

Atlas of Orthopedic Traction Procedures: By Carlo Scuderi. The purpose of this book is to fill a definite gap in orthopedic literature by photographs, line drawings and simple descriptive language, presenting an "Atlas of Orthopedic Traction Procedures." Price: \$12.50.

Atlas of Operative Technic Anus, Rectum and Colon: By Bacon and Ross. Interest in surgery of the anal canal, rectum, and colon has long been evident, but the frequency with which pathology in this field requires surgical correction is of greater magnitude than commonly realized. Many textbooks are available today, yet the rapid pace of modern surgical practice leaves little opportunity to the busy surgeon or the occasional operator for extended study. C. V. Mosby Company. Price: \$13.50.

Electrocardiography: By E. Grey Dimond. The rapid evolution of electrocardiography through a maze of changing nomenclature and new techniques has left behind a group of confused practitioners, confused not because of ineptness, but simply because they have not been free to follow the intricacies of V leads, or multiple chest leads, and of authority differing with authority. C. V. Mosby Company. Price: \$14.00.

Book Reviews

School Health Services: Copyright, 1953, by National Education Association, Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the cooperation of contributors and consultants.

This book is an excellent condensation of material gathered from many school health programs in this country. Although school health services are emphasized, the inseparability of health services from health education is repeatedly mentioned, because "the primary function of the school is education." For those who may not have a clear picture of what is meant by school health services, this book defines them as any of the following procedures.

1. To appraise the health status of pupils and school personnel;
2. To compel pupils, parents, and others concerning appraisal findings;
3. To encourage the correction of remediable defects;
4. To assist in the identification and education of handicapped children;
5. To help prevent and control disease; and
6. To provide emergency service for injury or sudden sickness.

The last chapter gives a brief but vivid account of the evolution of these health services and the roles played by such organizations as the American Medical Association, The Academy of Pediatrics, and the American Public Health Association.

The editor emphasizes the fact that "School Health Services are not conducted in a vacuum: They are carried on in communities in which other individuals and agencies are vitally concerned with child health. Fundamental to intelligent participation in school health activities is a clear understanding of the relationship of school efforts to those of parents, practicing physicians and dentists, and departments of public health." The book stresses that there should be no thought of competition with a family physician's responsibilities. A good school health program should actually increase private practice. It also emphasizes the importance of having a school health council which is truly representative of the community.

In the section on school health records, it was a pleasure to find Colorado's Cumulative School Health Record reprinted in detail.

There are excellent chapters on such subjects as:



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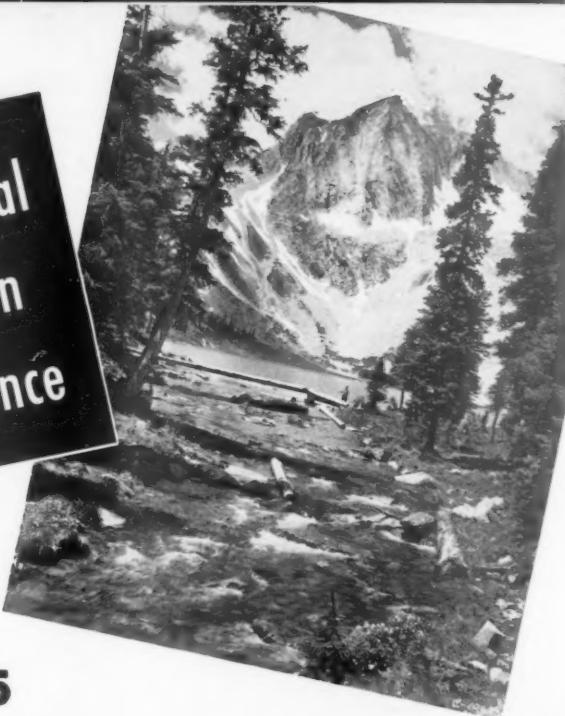
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GYNECOLOGY—Office and Operative Gynecology, Two Weeks, September 20. Vaginal Approach to Pelvic Surgery, One Week, June 21.

MEDICINE—Two-Week Course September 27. Electrocardiology and Heart Disease, Two Weeks, July 12. Gastroenterology, Two Weeks, October 25.

RADIOLOGY—Diagnostic Course, Two Weeks, October 4. Clinical Course, Two Weeks, by appointment. Radiation Therapy, by appointment.

PEDIATRICS—Clinical Course, Two Weeks by appointment. Congenital and Rheumatic Heart Disease in Infants and Children, One Week, October 11 and October 18. Two Weeks, October 11.

UROLOGY—Two-Week Urology Course, September 20. Ten-Day Practical Course in Cystoscopy every two weeks.

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5. The importance of paying attention to the health of all school personnel, not just the pupils.
6. The legal and legislative aspects of school health.

Abundant reference material is supplied and the printing and paragraphing make for easy reading. This book should be read or at least consulted by any physician who assumes responsibility for the medical care of school age children.

JOHN A. LICHTY, M.D.

Sexual Behavior in the Human Female: By Alfred C. Kinsey, Wardell B. Pomeroy, Clyde E. Martin, Paul H. Gebhard, Research Associates; and others on the Staff of the Institute for Sex Research, Indiana University. Foreword by Robert M. Yerkes and George W. Corner. 842 pages, 151 charts, 179 tables, four illustrations. Philadelphia and London: W. B. Saunders Company, 1953. Price, \$8.00.

Dr. Kinsey, like present-day political figures, must await future generations for evaluation. No matter what the verdict, his work has aroused a storm of controversy which we, as physicians, are obliged to consider.

This second in a series of reports is devoted to the white female population. It is an attempt "to discover what people do sexually, what factors may account for their patterns of sexual behavior, how their sexual experiences have affected their lives, and what social significance there may be in each type of behavior."

Criticism has been mainly directed at the social implications of the work and at the method used in collecting the statistics. The former stems from the age-old conflict between science and religion, between facts and morals, between what people are and what we would like them to be. I believe this criticism is justified, not on the basis of the work itself, but because of the attempt at popular distribution.

Dr. Kinsey states that scientists are obligated to make the results of their work "available to all who can read and understand and utilize our data." This is admirable but the publisher, with the apparent approval of Dr. Kinsey, has assumed that all who can read can also understand. To advertise and distribute such a book to the general public, which, however intelligent, does not have the necessary training to properly evaluate a scientific work, only results in misutilization of the data. How unfortunate if this were used as a guide, as a norm to which the individual must adhere, or worse yet, as justification for breaches in moral behavior.

The second major criticism is directed at selection of subjects and method of collecting statistics. Chapter 2, "The Sample and Its Statistical Analysis," is quite convincing. Far from interviewing a group of volunteer nymphomaniacs as has been charged, Dr. Kinsey has employed a method of statistical study called group sampling. He admits the shortcomings of this method but says it gives a more accurate sample than any other physically feasible at present. Any error resulting thereby would be in an under-rather than overstatement of sexual activity. However, certain groups—listed in the book—are inadequately represented; these must be considered in evaluating the results.

The real importance of the work lies in its being the first attempt to collect sexual facts

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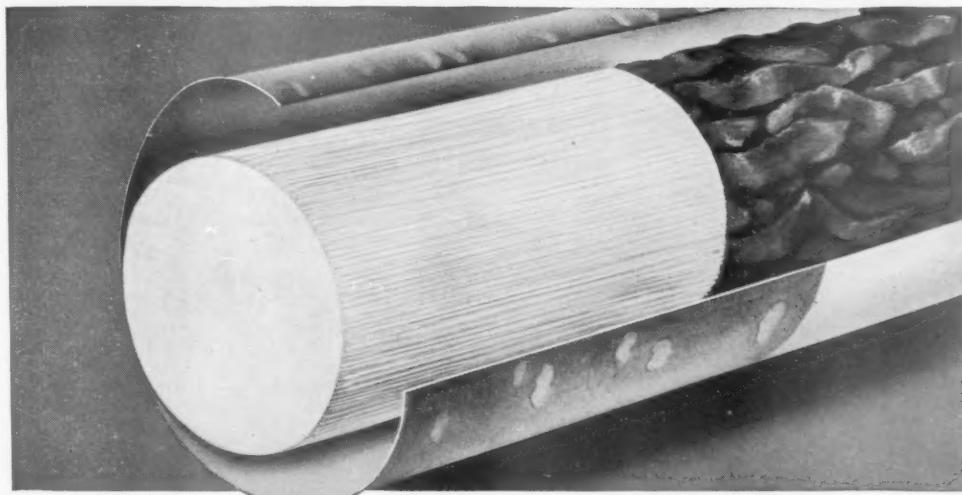
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from a statistically significant portion of our general population. Previous efforts included only small select groups or were concerned with patients seeking medical help. With the statistics I have no quarrel. Any attempt to present here some of the more sensational data, as did lay reviews, would give a distorted picture of the book. It must be read in its entirety to be understood and appreciated.

It is unfortunate that the last third of the book almost effaces the importance of the earlier chapters. This portion is devoted to conclusions drawn partly from a comparison of data on males and females gathered by Dr. Kinsey and associates, and partly from the highly controversial existing literature on sex physiology and psychology. The latter is beyond the scope of this book and possibly beyond the training of Dr. Kinsey. The effort to correlate in a few pages the opposing data on these subjects with his careful statistical studies is incongruous. Little new data is presented, and even that is not conclusive. The last third of the book does not fulfill the premise Dr. Kinsey set for himself, and is rife with theory. However, because of the importance of the main sections, the book should not be discounted.

As a means of sex education for the general public, "Sexual Behavior in the Human Female" is to be condemned. It remains for a philosopher to correlate the data presented by the scientists on one side, and the moralists on the other, and formulate a sexual "ten commandments." This Dr. Kinsey did not do. However, to physicians, especially gynecologists, psychiatrists and general practitioners, to social service workers, to clergymen, to lawmakers setting up standards of legal behavior, this book is very valuable and, indeed, should be required reading.

MAXWELL A. ABELMAN, M.D.

Clinical Allergy: By French K. Hansel, M.D., M.S. Director, Hansel Foundation for Education and Research in Allergy; Chief of Allergy Service, DePaul Hospital, St. Louis. With 86 illustrations and three color plates. St. Louis: The C. V. Mosby Company, 1953. Price, \$17.50.

The author of this text, "Clinical Allergy" has succeeded in the objective of bringing out a book containing the fundamentals and the practical application of these principles in the practice of clinical allergy. Dr. Hansel is well recognized in the specialty of otolaryngology and it is natural for this book to contain in detail the information he has amassed during many years of research

and practice. The author has included the usual chapters of immunological principles, botany, etc., but outstanding are the chapters on the physiology, bacteriology and histopathology of the nose and paranasal sinuses, the nasal and sinus manifestations of allergy, and the excellent chapter on cytology of the secretions in allergy. There is a detailed explanation of the principle of "small or optimum dosage" therapy in the administration of antigens for hyposensitization. An entire chapter is devoted to supplies and the preparation of dilutions of the various treatment mixtures used in the practice of clinical allergy. A detailed explanation is also made of the solution of mathematical problems which are too frequently puzzling to the physician. The current literature on steroids and antihistaminic drugs is summarized and an extensive bibliography is available for more detailed reading. Separate chapters on the special problems of allergy in children, gastrointestinal allergy, food allergy, allergic dermatitis and cerebral allergy serve to round out this well planned text.

Allergic disorders are commonly encountered in all phases of the practice of medicine. This text is a compilation of the available knowledge on allergy with enough detailed explanation for practical management. A final word of caution to the prospective reader—the methods of treatment described are not subscribed to by the majority of the leading allergists practicing clinical allergy today. This fact should not deter purchase of this text as the author has wisely included the commonly accepted method of treatment in his book.

DANIEL M. KRAUS, M.D.

Pathology, Second Edition: By W. A. D. Anderson. Publication date, September, 1953. Copyright, 1948, by the C. V. Mosby Co., St. Louis. Price: \$16.00.

With three exceptions, the list of collaborators remains the same as that of the first edition. The format has been changed to double column. In other respects, however, the appearance has been but little altered, with retention of the original paragraph form and content, the occasional revisions having for the most part been incorporated in the form of sentence deletions or additions. Most of the original illustrations have been retained, and only occasional new ones added. As in the first edition, the outstanding sections are those on Skin, by Arthur C. Allen; the Organs of Special Senses by J. E. Ash; the Bones and Joints, by Granville A. Bennett; and Effects of Radiation, by Charles E. Dunlap. These subjects, beautifully covered in Pathology, are in general



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1. Gurdjian, E. S., and Webster, J. E., Amer. J. of Surgery, 63:236, 1944.

incompletely presented or all but ignored in the other standard Pathology texts.

The coverage of neoplastic disease in the various sections (Skin, Bone, and Organs of Special Senses excepted) is rather disappointing from the pathologist's point of view, particularly in respect to histological description and illustration of the various tumors. The addition of a section on Neonatal pathology would have been welcomed by many. Such a section, although not sufficiently complete, has been incorporated in another standard pathology text. In general, the second edition of Pathology is extremely valuable to, and probably the best book for pathologists and various specialists (ENT, Dermatology and Orthopedics). It would seem, however, a rather difficult text for medical students because of the large amount of specialized detail.

WILLIAM D. MILLETT, M.D.

A. Manual of Clinical Allergy: By John M. Sheldon, M.D., Professor of Internal Medicine, University of Michigan Medical School; Assistant to the Chairman of the Department of Postgraduate Medicine; Physician in Charge of University of Michigan Allergy Clinics; Director of the Montgomery Allergy Research Laboratory. Robert G. Lovell, M.D., Instructor in Internal Medicine, University of Michigan Medical School; Kenneth P. Mathews, M.D., Assistant Professor of Internal Medicine, University of Michigan Medical School. 413 pages with 27 figures. Philadelphia and London: W. B. Saunders Company, 1953. Price: \$8.50.

The Manual, consisting of 413 pages, is prepared primarily for the physician interested in allergy either part-time or as a specialty. It places emphasis on practical clinical allergy; equipment, materials, preparation of extract, testing and detail.

Theory is minimized and procedures are minutely detailed. The twenty chapters cover allergy in all phases for the practical use of the physician who wants to know how—and where.

The index is a pleasure and the appendices describe preparations so that the physician may find it easy fun to make his materials.

RODERICK J. McDONALD, JR., M.D.

Manual of Clinical Mycology (Second Edition): By Norman F. Conant, Ph.D., Professor of Mycology and Associate Professor of Bacteriology, Duke University School of Medicine; David Tillerson Smith, M.D., Professor of Bacteriology and Associate Professor of Medicine, Duke University School of Medicine; Roger Denie Baker, M.D., Chief, Laboratory Service, Veterans Administration Hospital, Durham, North Carolina; Jasper Lamar Calaway, M.D., Professor of Dermatology and Syphilology, Duke University; Donald Stover Martin, M.D., Chief, Bacteriology Section, Communicable Disease Center, Chamblee, Georgia. New, Second Edition. 456 pages with 202 figures. Philadelphia and London: W. B. Saunders Company, 1954. Price: \$6.50.

In the ten years since publication of the first edition of this manual, many new facts concerning the epidemiology and immunology of the mycoses have been discovered. Antibiotics and sulfonamides are effective in the treatment of actinomycosis. Stilbamidine has proved curative in blastomycosis. The periodic acid-Schiff stain permits demonstration of fungi in tissue.

The authors neglect to mention the successful treatment of acrodermatitis enteropathica with Diodoquin. This condition was formerly confused with moniliasis.

The typography and illustrations are excellent. The bibliography gives the most important sources of general information in the field of mycology. The manual should be very helpful to the practitioner confronted with a fungus infection.

EGBERT J. HENSCHEL, M.D.

Music Therapy: Edited by Edward Podolsky, M.D. The practical applications of music therapy in a variety of mental, emotional and physical ailments have been established in many clinics and hospitals throughout the world. The effects of music on the mind and emotions have been studied and evaluated by psychiatrists, psychologists and music therapists within recent years. Music for therapeutic purposes is now being used in various hospitals throughout the United States. Price: \$6.00.

The book is written by different authors: psychiatrists, psychologists, music and occupational therapists. Physiological studies were made as to the effect of music on heart rate, circula-

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tion, blood pressure, respiration, brain waves, smooth muscle motility, metabolism, endocrine gland activity—all of which were definitely influenced by music. Individual variations are to be expected.

Theory supplied by Ira Altschuler, M.D.: In schizophrenics contact with higher cortical centers by usual means of communication is hard to establish. This difficulty is circumvented by establishing contact through a subcortical route: the thalamus. Music appeals to the thalamus through its primitive element: the rhythm. There is response to rhythm in children, in aboriginal tribes and animals (modern dairies are equipped with music). Once contact is established, which may be manifested by bodily motions or tapping with fingers, it is possible to work our way up in those mentally ill. Experiments with mental cases in institutions are very gratifying both on individual and group scale. Active and passive musical activities were successful.

Passing from the mental cases to the wide field of emotionally induced illnesses, we find very interesting observations in anxiety states, anger, depression, emotional fatigue, acute grief, tension headache, psychosomatic gastric disorders, emotional hypertension, insecurity. The principal reason why music is so important could be explained by analysis of its effect on the three psychodynamic spheres of Freud. The most primitive stratum Id, which is the unconscious instinctual level, needs music. The next sphere Ego is the rational part of man, it reasons, judges, compares. It has no objection to music, because there are no sharp conflicts in it. The third stratum, the Superego, supervises the Ego, separates good from evil and feelings of guilt originate there. The Superego is accessible to music, because music creates no feeling of guilt. Music has access to all the three spheres and its importance in the mentally ill reintegrating the dynamic spheres which have gone astray, is quite obvious.

In the so-called normal people or the emotionally affected, it is the greatest outlet for emotions, because music and its primitive form, the dance, which is a socially accepted form of expression of sexual impulses, offers as Altschuler

says a "modus vivendi" of the two most bitter and irreconcilable antagonists, the brain and the spinal cord.

Application of music in non-emotional sicknesses is extremely important. In general hospitals it is provided by earphones, soft background music in the halls. In the operating rooms it is of invaluable help if local, regional or spinal anesthesia is used. It helps nurses to perform their duties just as it does in industrial plants. It seems that our hospitals in the future won't be able to dispense with it in spite of the additional cost it may involve.

As to the kind of music: studies are extensive, because it varies in rhythm, harmony, modality, tone, tempo, volume, intensity. There are recommendations for selections in different cases and occasions. Here is a wide opportunity for personal dexterity in selections, depending on the aim to be reached. It offers a fascinating hobby to the weary MDs to familiarize themselves with this relaxing field of activity.

Means of music reproduction: records, tape and FM station (new 98.5 megacycles in Denver).

Our therapeutic armamentarium is widening—music gets official recognition, although it has been used since times immemorial; we are reminded of King David and Saul's harp quite often.

I can't help but to express my impression that this book marks an important milestone in medical progress and I feel that music in medicine has a very bright future.

LESLIE GREY, M.D.

Lectures on the Thyroid: By J. H. Means. Copyright, 1954, by the President and Fellows of Harvard College. A pre-eminent authority offers a coherent picture of present-day knowledge of the thyroid and its functions. Dr. Means, founder and for thirty-seven years head of the Thyroid Clinic of the Massachusetts General Hospital, has revised, for a larger audience, five lectures, published in recent years in various medical journals, to form the chapters of this book. Price: \$3.00.

Here in five lectures a gentleman thyroidolo-

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gist of international prominence concentrates his clinical experience and knowledge of forty years, and adds his stimulating speculations on problems as yet unsolved. He does this with objectivity and mature perspective, in an engaging and conversational manner.

This modest book is an orientation point for the past and future of thyroidology, and may well be placed among the classics in its field. It is a book for study by the medical student, the research fellow, the general practitioner, and the specialist. The paper, typography and illustrations are excellent.

THOMAS H. COLEMAN, M.D.

Diagnosis of Acute Abdominal Pain is a small, concise book of 235 pages by William Requarth, Clinical Assistant Professor of Surgery at University of Illinois College of Medicine. The author emphasizes the necessity for accurate and expeditious diagnosis of acute abdominal problems, and presents the diseases of the abdomen with a classification according to their urgency for surgical treatment. Differential diagnosis of individual problems is succinctly presented with aim toward an early practical solution, without the exhaustive tedious differential listings and discussions often found in texts of physical diagnosis. Nevertheless, coverage of acute abdominal problems is complete, including discussion of pathology and pathogenesis when knowledge of these aspects aid in clarification. There are numerous well chosen photographs, x-ray plates, and diagrams to illustrate the diagnostic criteria under discussion. The book should be of great value to the intern and surgical resident, should be useful to the physician concerned with diagnosis and treatment of abdominal pathology and should be an excellent review for the practicing general surgeon.

CARL H. McLAUTHLIN, M.D.

METHUSELAH

Methuselah ate what he found on his plate,
And never as people do now
Did he note the amount of the calorie count;
He ate it because it was chow.

He wasn't disturbed as at dinner he sat
Devouring a roast or a pie,
To think it was lacking in granular fat
Or a couple of vitamins shy.

He cheerfully chewed each species of food,
Unmindful of troubles or fears
Lest his health might be hurt by some fancy
dessert—
And he lived over nine hundred years!
—From a menu at Innes' Tea Room, Wichita,
Kansas; author unidentified.

The family physician is still the greatest source of new cases (of tuberculosis); next comes the contact group. The routine examination of admission to general hospitals is proving a valuable source of case-finding. Not only is it a more productive source than the mass surveys of whole communities, but it is of particular value to the medical profession, which is already the most important source of new cases.—G. J. Wherrett, M.D., Canadian J. Pub. Health, May, 1953.

Medical School Notes



MEDICAL ALUMNI TO MEET

The annual meeting and banquet of the Colorado Medical Alumni Association of the University of Colorado School of Medicine will be held on Friday, June 4. The scientific program will be at the Medical Center, and the banquet, preceded by a social hour, will be at the Albany Hotel.

IDAHO MEDICAL SESSION SET FOR SUN VALLEY

The 62nd annual meeting of the Idaho State Medical Association will be held at Sun Valley on June 13, 14, 15 and 16. Speakers are Dr. Ovid

O. Meyer, University of Wisconsin; Dr. O. W. Jones, Jr., University of California; Dr. Francis W. Lederer, University of Illinois, Dr. Vincent J. O'Connor, Northwestern University, and Dr. Russell R. de Alvarez, University of Washington.

It has been found that in pulmonary tuberculosis treated effectively with drugs for adequate periods there is little remaining reversible disease (lobular pneumonitis and tubercles without necrosis), and that the principal remaining components are necrotic nodules and fibrosis. The necrotic nodules frequently contain large numbers of tubercle bacilli, and usually communicate with bronchi or bronchioles, thus furnishing the anatomic prerequisites for potential relapse and dissemination.—William B. Tucker, M.D., Annals of Int. Med., November, 1953.

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1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.



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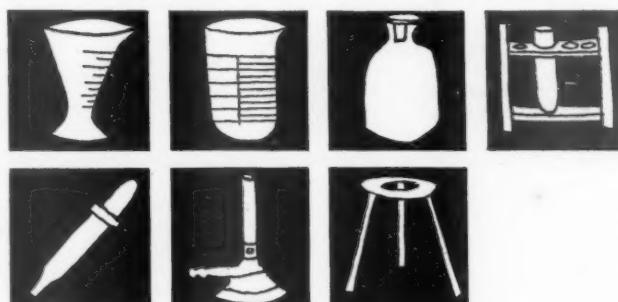
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1. Cook, M. H.; Free, A. H., and Giordano, A. S.: *Am. J. M. Technol.* 19:283, 1953.

2. Gray, C. H., and Millar, H. R.: *Brit. M. J.* 4824:1361 (June 20) 1953.

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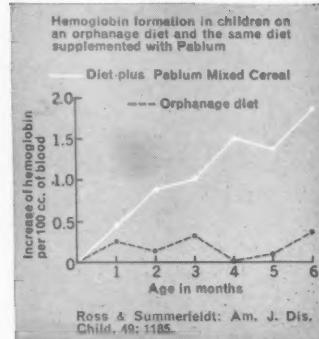
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1. Smith, N. J., and Rosello, S.: J. Clin. Nutrition 1: 275, 1953;
2. Jeans, P. C., in A.M.A. Handbook of Nutrition, ed. 2, New York, Blakiston, 1951, p. 280.

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